



**QUANTA**

**MAGAZINE**

**VISIT OUR WEB SITE AT  
WWW.QUANTA.ORG.UK**



**Volume 28 - Issue 3  
April/May 2011**

## Information on the Association

Membership of QUANTA, the independent QL user group, is by annual subscription. The Membership Secretary can supply full details. Copies of the association's constitution & annual accounts are available from the Secretary. There is an extensive software library. There are active national subgroups. Details are given in the Member's Guide and in this magazine.

### QUANTA Committee - 2011/2012

Chairman	Sarah D. Gilpin	181, Urmston Lane, Stretford, Manchester. M32 9EH	
	Email: <a href="mailto:chairman@quanta.org.uk">chairman@quanta.org.uk</a>		Tel: 0161 865 2872
Secretary	Alison Southern	40, Distaff Road, Poynton, Cheshire. SK12 1HN	
	Email: <a href="mailto:secretary@quanta.org.uk">secretary@quanta.org.uk</a>		Tel: 01625 850067
Treasurer, Membership Secretary & Missed Issues	Keith Dunbar	44, Dalton Avenue, Stretford, Manchester. M32 9TP	
	Email: <a href="mailto:treasurer@quanta.org.uk">treasurer@quanta.org.uk</a>		Mobile: 07789 483 800
	Email: <a href="mailto:membership@quanta.org.uk">membership@quanta.org.uk</a>		
Magazine Editor	Lee Privett.	37, Swanage Road, Southend on Sea, Essex. SS2 5HX.	
	Email: <a href="mailto:editor@quanta.org.uk">editor@quanta.org.uk</a>		
Librarian Assistant Librarian	David Buckley	136, Denton Lane, Chadderton, Oldham. OL9 8PS	
	Email: <a href="mailto:librarian@quanta.org.uk">librarian@quanta.org.uk</a>		Tel: 0161 622 1600
	<a href="mailto:asstlibrarian@quanta.org.uk">asstlibrarian@quanta.org.uk</a>		
Helpline, Librarian & News Editor	Dilwyn Jones	22 Erw Las, Coetmor New Road, Bethesda, Gwynedd. LL57 3NN	
	Email: <a href="mailto:helpline@quanta.org.uk">helpline@quanta.org.uk</a>		Tel: 01248 601599
	Email: <a href="mailto:librarian@quanta.org.uk">librarian@quanta.org.uk</a>		Mobile: 07749-643 922
	Email: <a href="mailto:news@quanta.org.uk">news@quanta.org.uk</a>		
Web Master	Dan Abbott	All contact with Web Master by email please.	
	Email: <a href="mailto:webmaster@quanta.org.uk">webmaster@quanta.org.uk</a>		
Web Administrator	Keith Dunbar	44, Dalton Avenue, Stretford, Manchester. M32 9TP	
	Email: <a href="mailto:webadmin@quanta.org.uk">webadmin@quanta.org.uk</a>		Mobile: 07789 483 800
Back Issues Requests	Basil Lee	31 Fairdale Gardens, London. SW15 6JW	
	Email: <a href="mailto:backissues@quanta.org.uk">backissues@quanta.org.uk</a>		Tel: 0208 789 1976

**QUANTA reserves the right to publish, reject or edit any material submitted. The opinions expressed are solely those of the contributors. Member's private small ads - free (up to 50 words). Non-members private small ads (and members after 50 words) 50p per 10 words or part thereof. Terms strictly paid up-front with order. Receipt if requested. All copyrights and trademarks are hereby acknowledged.**

# QUANTA Magazine

## CONTENTS

COPY DATE for next issue.....	3
EDITORIAL..... Lee Privett.....	4
CHAIRMAN'S NOTES..... Sarah Gilpin.....	5
THE NEW QUANTA EDITOR..... Lee Privett.....	6
SIMPLE 3D BUTTON EFFECTS... Dilwyn Jones.....	7
JOCHEN MERZ SOFTWARE (Advert).....	10
SERIAL LOGIC..... Steve Poole.....	13
A.G.M. 2011 REPORT..... Geoff Wicks.....	15
POINTS OF VIEW.....	20
Back to the QL (Part 2)..... Lee Privett.....	20
QUANTA NEWS..... Dilwyn Jones.....	21
QUANTA POSTER.....	30
QUANTA SUBSCRIPTIONS..... John Gilpin.....	35
QUANTA WORKSHOP & A.G.M... Dilwyn Jones.....	39
RWAP SERVICES (Advert).....	40
QUANTA HELPLINE..... Dilwyn Jones.....	47
QL TODAY (Advert).....	50
QL GRAPHICS..... Dilwyn Jones.....	51
SUBGROUP MEETINGS.....	59
QUO VADIS DESIGN (Advert).....	62

**COPY DATE for JUNE/JULY 2011**

**ISSUE is:**

**5<sup>TH</sup> July 2011**

**Please ensure that your copy reaches the editor on or before that date. Copy on Paper or Magnetic Media or by Email.**

**All Contributions are Welcome.**

**Copy on Microdrive or Floppy Disk or CD to be accompanied by hard copy printout.**

**Copy by Email to - [editor@quanta.org.uk](mailto:editor@quanta.org.uk)**

This Magazine and all the articles etc. within it are copyright © QUANTA 2009 unless otherwise stated. Reproduction and redistribution in any form is not allowed without the express written permission of the publisher. All copyrights and trademarks are hereby acknowledged.

**W**elcome existing and new(ish) members to the latest issue of QUANTA Magazine. You will see by the contents list we have another interesting set of articles for you to read. As this is my first editorial I would just like to take this opportunity to say a big thank you to John Gilpin for his many roles in QUANTA over the past few years and wish him well for the future.

Amongst the articles and AGM report you will note an entry based on a new piece of kit for the black box QL, the first bit of add-on/alternative equipment to be released in many years specifically for the QL. Let's hope that this will not be the only one, as there are many murmurings going on about other interesting developments, so watch this space.

This is your QUANTA Magazine and although it goes out to all members, we still need your support, not just through subscriptions but for ideas, questions, answers and articles long as well as short. There have been a number of returners to the QL recently (myself included) who may need some basic pointers, something the experienced hands take for granted, I am sure this is something we can help with through the magazine for the benefit of all.

Secondly, now more than ever there seems to be a growing movement developing to get young people interested in the fun of computing. With the interest in retro games, continued sales on auction sites for old computer equipment and newer directions such as RaspberryPi, the QL is an ideal contender for such a revival. QUANTA can be key in this renewal (that Sir Clive Sinclair and others started so long ago), but what is QUANTA's unique selling point (USP), what is it that we do that can get young people engaged in QL software and maybe QL hardware?

One last plea from me before signing off. Are there any creative people out there who can draw real or cartoon like sketches for inclusion in the QUANTA Magazine?

As always any responses are welcome, please use the appropriate contact details in this magazine, even if it is snail mail.

Lee Privett

Firstly I should like to thank all those who helped to run a successful workshop and Annual General Meeting in my absence. Secondly I would like to thank all those who sent messages of condolence on the death of my Father that Saturday.

In particular my thanks go to Geoff Wicks who stepped in as temporary Chairman to run the A.G.M. His detailed report is on page 15. I understand that numbers were significantly above the quorum minimum of 10 (as per the current constitution).

I am pleased to report that we have a new member on the Committee, Lee Privett, who is a returning member to the QL community. Lee's presence will provide a much needed southern half of England redress to the north/south imbalance. Lee has sent in an introduction to himself (which follows this section) as he has volunteered to take over as magazine Editor. I am editing this issue while John Gilpin is writing a guide to the new editor.

I also wish to thank John Gilpin for his many years of service to QUANTA, both as Treasurer/Membership Secretary and as Editor of the magazine. I welcome Keith Dunbar as our new Treasurer/Membership Secretary.

Looking to the future, the Committee is continuing in its efforts to get the new website up and running in an interactive way. We appreciate that there have been problems in the recent past and that there has been much constructive criticism from various sources but we expect to see an improvement shortly.

I am pleased to see that the members attending the Annual General Meeting have agreed to both the necessity of a rise in Subscriptions (after 26 years) and the new rate of £20.00 plus postage abroad. Also agreed was the remit to rewrite the Constitution to incorporate the changes in electronic communication that have occurred over the lifetime of the QL. A draft constitution will be in the next issue of the magazine and the Committee will welcome any comments made by members (addressed to the Committee please). A final version will be presented as a special resolution to the Annual General meeting in 2012 to take immediate effect.

I am a recent returnee to the QL scene, this was brought on by a long stay at home, surfing the Internet and looking at emulators. I stumbled across the QUANTA website which surprised me as the last time I was a QUANTA member was in 1988(ish) when the world wide web didn't even exist. As an electronics engineer at the time I had published articles in both Practical and Everyday Electronics magazines and on the computing side some programs for the Spectrum using 'MegaBasic' (remember that ?) and an article in QL User, 'Bridging the Gap, Spectrum Connection' which covered dumping basic listings from the Spectrum to the QL via the serial port connection.

I then changed careers and moved into teaching in Further Education where I have been ever since (also as a student), specialising in media, multimedia and games development. I mainly manage staff and courses now and have overall responsibility for Higher Education in the Faculty of Applied Science & Technology. The skills I have developed over the years include being a good listener, a quick but thorough marker of students assignments and exam scripts and occasionally getting the light bulb switched on above the students heads, that can sometimes be a bit of a challenge. As a college we have a plethora of documents in a variety of formats and in my role I create even more or refine existing ones. I am always looking for ways to improve how we receive information with particular attention to student's learning styles.

Having volunteered for a committee post and being passionate about QUANTA's continued existence I am grateful to my predecessors determination through what seems a bumpy ride (Thanks John) and that it will appear sometimes like a thankless task. I can happily say I have caught the QL bug again! despite being inoculated by the microbes of Microsoft, and I am really looking forward to editing the QUANTA magazine.



*Lee Privett  
April 2011*

**H**aving tinkered awhile with Steve Poole's 3D Text Perspective and Animations package on library disk MD05, I began thinking about how to create very simple 3D sculpting effects and realised that the simplest effects could be achieved quite easily with a "sun and shade" approach.

Basically, a button on screen in a program can be made to look slightly raised or depressed just by the judicious use of light and dark lines. Our brains are quite accustomed to the sun shining on us from above and become accustomed to working out where the light source is from interpreting the light and dark shades.

So, by working out which edges should have dark and which have light coloured edges, we can produce simple sculpted 3D effects. To give you an idea of what I mean, have a look at this diagram (figure 1) which was originally produced to show the various types of 3D border effects the new Window Manager could produce.



*Figure 1: Window Manager 2's 3D border effects*

Here you can see that the designer has used white and dark grey lines around the edges of the buttons to make them look a little more sculpted than usual. Notice how the buttons look 'raised' when the lighter lines are above and left of the button (e.g. the one labelled 1024 in figure 1), whereas the ones with the line colours reversed give the opposite impression – namely that the button looks as though it has been pressed in or depressed. To some extent this is subjective, but most people will interpret the rectangles with light above left and dark below right as a raised button, and as a depressed button when the shading is reversed.

# QUANTA Magazine

Note also how the rectangle marked '404' has lines arranged in a more complex way to make it look like the outer border is raised and the inside button area looks flat.

Once you realise that they are designed to look as though the light source is above and left of the shape, you begin to realise it's just a matter of working out where the light and dark lines go to see how to plan your '3D' effect view.

One question you might ask is "how do you achieve this without GD2 colours?"

You have to be a little inventive, but it is quite possible. By and large, reserve black and white for the shading and draw the shape itself in red or green, or use stippled colours like John Miller did with the buttons in his Q-Count home accounts program, or as Thierry Godefroy has done in his Archivers Control Panel program. Archivers Control Panel is shown in Figure 2, although I don't know how well the effect will show up in the black and white printed magazine.



*Figure 2 – sculpted 3d button and window borders in Archivers Control Panel*

Once we have realised how these work, it is a fairly simple matter to write our own programs to produce similar effects. This short program creates a green button on a green background. First it draws a "raised" button as already described, then when you press any key it changes to look like a "pressed" button.

```
100 REMark 3d-effect outlines
110 :
120 PAPER 4 : CLS
130 :
140 REMark button text
150 CURSOR 30,25 : INK 0 : PRINT 'Press any key'
160 :
170 REPEAT pressing_keys
```



# QUANTA Magazine

```
180 REMark draw the "raised effect" edges
190 BLOCK 2,20,20,20,7 : REMark left edge
200 BLOCK 100,1,20,20,7 : REMark top edge
210 BLOCK 2,19,118,21,0 : REMark right edge
220 BLOCK 98,1,20,39,0 : REMark bottom edge
230 :
240 REMark keep pressing the button until ESC pressed
250 IF INKEY$(-1) = CHR$(27) THEN EXIT pressing_keys
260 :
270 REMark draw the "pressed effect" edges
280 BLOCK 2,20,20,20,0 : REMark left edge
290 BLOCK 100,1,20,20,0 : REMark top edge
300 BLOCK 2,19,118,21,7 : REMark right edge
310 BLOCK 98,1,20,39,7 : REMark bottom edge
320 :
330 REMark keep pressing the button until ESC pressed
340 IF INKEY$(-1) = CHR$(27) THEN EXIT pressing_keys
350 END REPEAT pressing_keys
```

*Listing 1 – simple 3d button effect*

The routine simply draws a border in one set of colours around the button in lines 190 to 220 (the button text is written in line 150). After you press a key, lines 280 to 310 reverse the border colour for the opposite effect, until you press ESC to stop the program (lines 250 and 340).



*Figure 3 - The output of the button program, Slightly modified to show both button states in the same picture.*

You can take this a stage further, as I did in my Wordsearch puzzle program. Here I drew a whole grid of raised effect buttons simply by dividing a single colour square up with white and black lines, as shown in the second listing and screen dump of figure 4. Drawing a grid like this is visually quite effective in games programs, since a 3d board can look a lot more interesting than just a simple flat grid with ordinary lines, for example.

```
100 REMark draw a grid of raised buttons
110 Size = 8 : REMark sizexsize grid
120 :
```

# QUANTA Magazine

## Jochen Merz SOFTWARE

Kaiser-Wilhelm-Str. 302  
47169 Duisburg, Germany

Fax +49 203 502012  
EMail: SMSQ@J-M-S.com

### SEVERAL PRICE CUTS!

<b>QPC2 Version 3 + SMSQ/E Software QI-Emulator for PC's</b> .....	EUR 59,90
<b>QPC2 Version 3 - Upgrade from QPC2 Version 2</b> .....	EUR 19,90
<b>QPC2 Version 3 - Upgrade from QPC2 Version 1</b> .....	EUR 39,90
<b>QPC Print</b> - printer emulation driver for QPC .....	EUR 39,90
<b>BUNDLE: QPC2 and QPCPrint</b> .....	<b>ONLY</b> EUR 79,90
<b>Agenda</b> Agenda program for WMAN and Prowess .....[V1.09] .....	EUR 14,90
<b>Suqcess</b> Database front-end for WMAN .....	[V2.05] EUR 19,90
<b>QD2003</b> Pointer-Environment-Editor .....	[V8.01] EUR 29,90
<b>QD2003</b> Upgrade from Version 9 and older .....	[V8.01] EUR 14,90
<b>QMAKE</b> Pointer-driven MAKE for GST/Quanta Assembler .....	[V4.31] EUR 14,90
<b>BASIC Linker</b> .....	[V1.21] EUR 14,90
<b>WINED</b> Floppy/Harddisk Sector- & File Editor .....	[V1.26] EUR 14,90
<b>FIFI II</b> File-Finder - Extremely useful .....	[V4.31] EUR 14,90
<b>FIFI II</b> Upgrade from Fifi Version 3 or older .....	[V4.31] EUR 9,90
<b>EPROM Manager</b> .....	[V3.02] EUR 14,90
<b>QSpread2003</b> Spreadsheet Program .....	[V4.04] EUR 29,90
<b>QSpread2003</b> Upgrade from Version 3 and older .....	[V4.04] EUR 14,90
<b>QPAC I</b> Utility programs .....	[V1.11] EUR 19,90
<b>QPAC II</b> Files, Jobs & other Things .....	[V1.45] EUR 29,90
<b>QTYP II</b> Spell checker .....	[V2.17] EUR 19,90
<b>QPTR</b> Pointer Toolkit .....	[V0.30] EUR 29,90
<b>DISA</b> Interactive Disassembler .....	[V3.04] EUR 29,90
<b>CueShell</b> .....	[V2.14] EUR 29,90
<b>CueShell for QPC</b> .....	[V2.14] EUR 14,90
<b>SER</b> Mouse software mouse driver for serial mice .....	EUR 10,00
<b>EasyPTR</b> Version 4 .....	[V4] EUR 59,90
<b>EasyPTR</b> Version 4 - Upgrade from earlier versions .....	[V4] EUR 39,90
<b>QDT</b> - QI Desktop program .....	EUR 59,90
<b>QMENU</b> Version 8 - with new, printed Manual .....	[V8.02] EUR 24,90
<b>QMENU</b> Version 8 - Update from earlier Versions, also with printed manual .....	EUR 17,90
<b>QMENU</b> Version 8 - New/Update for QI Today subscribers, with prtd manual .....	<b>ONLY</b> EUR 14,90

**Please add EUR 4,90 for postage to all destinations - Germany, Europe, Worldwide!**

**We accept VISA, MasterCard & Diners Club online and offline!**

**Details for money transfers:**

- Deutschland: Jochen Merz, Account 493 50 431, Postbank Essen, BLZ 360 100 43
- Österreich: Jochen Merz, Account 85055317, PSK Wien, BLZ 60000
- Switzerland: Jochen Merz, Account 60-690080-4, PostFinance, Clearing Nr 09000
- The Netherlands: Jochen Merz, Gronummer 3258439, Postbank NL, Amsterdam
- and from all other countries in EUR with IBAN and BIC to account  
Jochen Merz, Deutsche Postbank AG, IBAN: DE21 3601 0043 0611 1004 37 / BIC: PBNKDEFF 360
- UK customers can pay in £ (convert EUR prices above to £ by multiplying with 0.90) to  
Jochen Merz, Account 83795395, Citibank UK, Sort code 30-00-45  
or send cheques in £ - no fee for UK sterling cheques!
- US customers can pay in US\$ (convert EUR prices above to US\$  
by multiplying with 1.45) - no fee for US cheques in US\$!

*Cheques payable to Jochen Merz only!*  
Price list valid until 30th of June 2011

# QUANTA Magazine

```
130 PAPER 4 : CLS : CLS #0
140 :
150 REMark try to draw a 3-D tile grid, 12 pixels square
160 :
170 REMark black lines
180 FOR y = 1 TO Size
190   BLOCK Size*12,1,4,4+(12*y)-2,0 : REMark horizontal
200   BLOCK 1,Size*12-1,4+(12*y)-1,4,0 : REMark vertical
210 END FOR y
220 :
230 REMark white lines
240 FOR y = 0 TO Size-1
250   BLOCK Size*12,1,4,4+(12*y)-1,7 : REMark horizontal
260   BLOCK 1,Size*12,12*y+4,0+4-1,7 : REMark vertical
270 END FOR y
```

*Listing 2 – a simple 3d grid used to represent a game board*



*Figure 4 – output of listing 2*

While the techniques used to draw these objects is hardly high tech, it does show that even with the restricted range of colours in 4-colour mode on a standard QL, you can still achieve remarkably effective 3d effects for your own programs using just simple black and white lines. Experiment a little with the PAPER colour set in line 130. Try red (PAPER 2) to see how it looks. Try stipples such as red and green (PAPER 2,4,3) or green and white (PAPER 4,7,3) to see how it looks.

Of course, the technique I have described is very simple-minded and only really works for straight sided and rectangular shapes since it is easy to decide where, with a given light source, the light edges and the darker shadows will fall, although you may like to experiment a little with other shapes to see how easy or how difficult it is to produce simple 3d effects in your own programs.

I referred to the Window Manager 2 3d borders at the start of this article. If you have used Easyptr 4, you may be aware of how easy it is to

# QUANTA Magazine

use those 3d border styles in your programs. For those who haven't, here's the shortest of tutorials!

Set up any old menu in Easyptr 4. The default menu size may suffice. Select the 'Outline' item and then the 'Attributes' command nearer the bottom of the list of commands. This brings up the menu in figure 5 below.



Figure 5 – the Attributes menu in Easyptr 4, where we can set the border type



Figure 6 – the 3d border attribute setting

Move the pointer down to the Border command. With the pointer over the word Border, click on the loose item. The cursor now appears in the box with the number in it, beneath the Border command. Now immediately press the cursor down key (no other key, just cursor down). Most of the menu's commands now 'grey out', change colour and become unavailable. This is because we are now working with the list of Window Manager colour items (the list starting with Window Border, Window background, and so on). To the right of this, you will see a further small menu has become available which lists the various colour palettes you can choose from – Sys (System), Aur (Aurora palette) and so on. At the bottom of the list you will see the word Bdr, which is the list of border colour settings – click on this. See Figure 6 above.

Clicking on 'Bdr' should now bring up the menu shown in figure 7 below, where you can select one of the special 3d border effects to replace the 'named colours' previously in the window.



Figure 7 – the 3d border selection menu



Figure 8 – one of the 3d border effects

# QUANTA Magazine

Once you have selected the border required (and note that as shown in figure 1 some of them are not compatible with standard QL colour modes) you can click on OK at the top and return to the menu design screen to see the effect in your menu. Figure 8 above shows such a sample. Try varying the border width too to see how it affects the appearance of the border.

I hope this short article has shown how simple it can be to generate very simple 3d effects in your own programs, whether it be by the simple use of light and dark lines to generate lighting and shade effects, or by using the simple effects available on GD2 systems which can make use of Window Manager 2 facilities.

## **SERIAL LOGIC**

**Steve Poole**

In IQ tests, one major intellectual capability examined is the ability to accomplish the recognition of logical series. Yet we interpolate series every time we read, for as we follow words from left to right, our brains anticipate what the next ones will be. We do this of course without thinking, but when it comes to anticipating series of numbers, we need special education, unless we are autistic, in which case we can calculate very complex problems. But why, nobody knows yet...

As an example of looking ahead, the next figure in the series triangle, square, pentagon would easily be determined as hexagon. But if in place of the pentagon [N] there was a hexagon, you would have to deduce the series  $[N<1]-[N<1]-[N<2]+1$ , where  $N<1$  indicates the number one place to the left of the current position, giving a seventy-sided polygon, not so obvious to determine! (But please beware that as with many series, there can often be more than one solution possible... which the QL will not have calculated...). Now for a description of the protocol used by the program :

First you are asked for a difficulty level of from 0 to 3. Difficulty '0' means you only juggle with those numbers written in the series, (without the intermediate +, -, or \* operations). Difficulty '1' limits the formula to additions only. '2' allows a mix of additions and subtractions. '3' can also include multiplications, so it is very much harder! I spare you divisions, as these rapidly quit the realm of whole-number solutions. You may have to enter your difficulty level several times, as the program rejects any suite that would go out of range...

# QUANTA Magazine

Now for a concrete example : If the series generated uses  $([N<1]+3)*[N<2]$ , that signifies that the next number in the series, (N), is equal to the preceding number to which is added three, the whole multiplied by the number preceding it by two places.

Eg: if the series is 2 4 5 14 85 N, the next figure is

$$N = (85 + 3) * 14 = 4420$$

The program always starts you off with five given figures. You in turn should then enter successively the next three figures that you think completes the series. The program will beep high or low according to if your reply is right or wrong, and will then print the correct numbers so far. Finally, the program prints the current formula... And that's about all there is to it. But do use a calculator if you wish, as the higher difficulty levels are far harder than the mental arithmetic capacities of most people.

As this program was written in standard Basic in 1984, it was riddled with GOTOs and GOSUBs, which I have eliminated as they are a nightmare to follow, thereby reducing the code from 150 lines to 52.... But I am satisfied with the new program which does a lot in few lines, and thought QUANTA members would find it interesting. The only difference between the output of this and the original routine is that I don't give you a score, as this seems pretty meaningless anyway.

The interesting feature of this program is that it shows how apparently unrelated numbers may well be related by simple formula to form harmonic structures. (Food for thought for numerologists). If you fancy a programming challenge, try writing routines that will solve the problem for you...

Happy IQ training...

```
100 ::
110 REMark Series_bas, by S.Poole, v15apr2009
120 REMark For Quanta. Beta-test by Bruno Coativy.
130 :
140 CLEAR: RESTORE : OPEN#1,con_64: WINDOW 512,256,0,0: PAPER 7:
INK 0: CLS
150 h=12345: i=1E6: w=13: DIM s$(6), n$(w), n(w), t(w)
160 PRINT'Difficulty " +-*" : 0 to 3?!!': i$=INKEY$(#1,-1)
170 IF i$ INSTR '0123': x=i$: ELSE GO TO 160
180 s$(4 TO 6)='+-*' : PRINT x
190 :
```

# QUANTA Magazine

```
200 REMark get the formula figures:
210 RESTORE : FOR f=1 TO 8 : READ n$(f)
220 RESTORE : FOR f=9 TO w: READ n$(f)
230     UN=0: IF x=0: n$(7)=0: UN=1
240     DATA '[' , 'N' , '-' , RND(1)+1 , ']'
250     DATA RND(4 TO 6) , RND(1 TO UN*3) , RND(4 TO 6)
260     n(1)=RND(8)+1: n(2)=n$(4): n(3)=n$(7): n(4)=n$(12): k=1
270 :
280 REMark Calculate the entire series:
290 FOR loop=1 TO 8
300     a=n(1)-n(2): b=n(3): c=n(1)-n(4)
310     s=n$(6): SElect s: =4:d=a+b: =5:d=a-b: =6:d=a*b
320     IF x=1: n$(6)=4: n$(8)=4: d=a+b: e=d+c
330     s=n$(8): SElect s: =4:e=d+c: =5:e=d-c: =6:e=d*c
340     IF x=2 THEN
350         s=RND(4 TO 5): n$(6)=s: SElect s: =4:d=a+b: =5:d=a-b
360         s=RND(4 TO 5): n$(8)=s: SElect s: =4:e=d+c: =5:e=d-c
370     END IF : IF (n(1)=e) OR ('E' INSTR e): BEEP h,255: RUN
380     n(1)=e: t(k)=e: k=k+1
390 END FOR loop
400 :
410 REMark print the series so far:
420 FOR f=6 TO 8
430     k=1: FOR j=1 TO f-1: PRINT t(k)!!: k=k+1
440     INPUT;i$: IF i$<-i OR i$>i: PRINT;'Oops!': GO TO 440
450     IF i$=t(f): BEEP h,6: ELSE BEEP h,67
460 END FOR f
470 :
480 REMark print the series including the try:
490 k=1: FOR j=1 TO f: PRINT t(k)!!: k=k+1
500 :
510 REMark print the formula:
520 PRINT\n$(1 TO 5); s$(n$(6)); n$(7); s$(n$(8)); n$(9 TO w);
530 PRINT' Another y/n?': i$=INKEY$(#1,-1): IF i$='y': RUN:
ELSE STOP
```

## A. G. M. 2011 REPORT

**Geoff Wicks**

**T**his year's A.G.M. was a somewhat sombre affair, not just because those present had been shocked by the Chairman's bereavement, but also because QUANTA has had a difficult 12 months with problems over the magazine, the website, the constitution and finance. However the atmosphere was not one of despair, but more one of looking to the future. As Dilwyn Jones put it, QUANTA is starting "to move towards 30 years of the QL by 2014".

# QUANTA Magazine

About 20 people had attended on the Saturday and, given that attendance is usually lower on the second day of a two day workshop, there was a genuine concern that Sunday's A.G.M. would be inquorate. In the event there was a quorum, but it was a near thing.

On Sunday morning the committee asked me to chair the A.G.M. in Sarah Gilpin's absence, a somewhat daunting task given my reputation of being a difficult member at A.G.Ms I had to do a hurried preparation during the lunch hour before taking a short walk to calm my nerves.

The first item at the A.G.M. was not on the agenda because Secretary Alison Southern had to ask the members' agreement for me to chair the meeting.

After the approval of the previous year's minutes, QUANTA A.G.Ms traditionally start with the reports from the officers.

Sarah Gilpin had reported, "The review of our achievements over the last year is disappointing" Tony Hill had stepped down as Magazine editor and John Gilpin once again had to fill the gap. In spite of the efforts of Dan Abbott and Keith Dunbar there had been unforeseen difficulties with the website. An attempt at a central location for last year's A.G.M. had not resulted in an improvement in attendance. There had been a loss of about £500 over the year.

There was no lengthy discussion of Sarah's report because the main points raised were planned as agenda items later in the meeting.

In her report Alison Southern had placed emphasis on proposals to amend the constitution, stressing the committee welcomed all suggestions "whether they are a complete rewording of the constitution or merely a clarification of certain key clauses." She also reminded members that QUANTA had made a second loan to Rich Mellor to enable the production of a new batch of keyboard membranes.

John Gilpin presented his last report as Treasurer and it was a swansong that could have a lasting effect as he was proposing some radical changes. QUANTA had made a loss of £516 during the year and, in his opinion, the point had been reached where no further reductions in expenditure were possible. In recent years QUANTA finances have been



# QUANTA Magazine

helped by the sale of second hand hardware by Rich Mellor, but the stock of suitable goods was now almost exhausted.

In the circumstances he was recommending an increase in the subscription. No discussion on this proposal took place as it was a separate item on the agenda.

John had better news in his report as Membership Secretary and could report a net loss of just 5 members. Overseas membership had increased by two and UK membership had fallen by 7. (In fact QUANTA membership has stabilised in recent years. In the last five years it has fallen by 24 or 12%. This compares with a fall of 48% in the five years before that)

Another area of stability has been the committee and all the previous members, with the exception of John Gilpin, stay in office. Sarah Gilpin and Alison Southern remain as Chairman and Secretary respectively under clause 5.3 of the constitution and Keith Dunbar replaced John Gilpin as Treasurer and Membership Secretary. Dan Abbott, Dilwyn Jones and Dave Buckley were renominated as Ordinary Committee Members. They were joined by Lee Privett. As there were 4 nominations for six ordinary committee posts voting was not necessary.

Lee Privett is a former QLer who returned to the scene last year. When researching the QL community he visited the QUANTA website. He saw his own name in an illustration in the library section and decided to rejoin. He is especially welcome on the committee as he lives in Essex and his presence helps to reduce undue prominence of northerners. The downside is that committee expenses are likely to rise.

Following the appointment of the auditor there were two major items of A.G.M. business, a proposal to increase the subscription and a proposal to rewrite the constitution. Given the importance of these matters, both had been the subject of forums earlier in the day. This was to enable longer discussion than was possible in the A.G.M. The committee had also invited members to submit ideas and opinions before the A.G.M.

Only one member sent an email about the subscription and this was a plea for consideration to be given to those members who opt to receive the magazine by email.

# QUANTA Magazine

In both the forum and A.G.M. discussions the members saw the need to increase the subscription, but there was some disagreement about the size of this and whether or not it should be increased in phases. The problem with a phased increase is that many members pay by standing order and they would have to be asked to change this with each subscription increase. It was also felt that no special arrangements could be made for members who opt for the electronic magazine, because not only were printing and postage costs increasing, but also Internet costs. To solve the technical problems that have arisen with the website the committee have opted to use a server with greater technical support at a cost of about £300 a year.

Voting on the subscription took place in three stages. The first was on the principle of an increase and this was approved. The second was to fix the size of the subscription and in accordance with the Treasurer's recommendation this was fixed at £20 with a postal supplement for overseas members. Those people willing to pay for three years would pay £50. New members will have a special rate of £15 for 1 year and £45 for three years. The new rates come into force in January 2012.

Currently there are two subscription years. One runs from January and the other from July. The Treasurer recommended that in future all subscriptions should run from January and, to ease the transition, the 2011 July renewers would be given a subscription holiday for the last six months of the year. This proposal was approved.

The committee had also invited representations on the constitution and four people had made detailed written suggestions, one of which was a draft of a possible revised constitution. This had been written by Rich Mellor, who was formerly a solicitor, and had been produced in conjunction with Geoff Wicks. Although copies of all four representations were available at the forum, few people had looked at them and much of the forum time was taken up with Rich and I describing the proposals and the reason for them.

Although QUANTA's constitution has been revised on many occasions it has never had a complete revision and still recognises only two QL systems, the black box and the Thor. Some modification is also necessary to bring the constitution into line with QUANTA's present ways of working and changes in British law.

## **QUANTA Magazine**

I do not intend to go into details of the discussion because the committee is planning to publish a draft constitution with the magazine as soon as practicable. This is to allow members some months to discuss the details, make representations on the content and propose further changes if necessary.

The meeting approved plans for a revised constitution to be presented to members as a Special resolution for approval at the 2012 A.G.M.

One feature of the draft constitution is the provision for electronic participation in meetings. At committee level this happens regularly as email provides a quick and cheap way for the committee to take decisions. However Rich Mellor reminded the meeting that this practice may not be entirely constitutional. The meeting gave permission for the practice to continue as an interim measure until full discussion of a new constitution at next year's A.G.M.

I then asked the committee to investigate the feasibility of online participation in the A.G.M. This was something I was planning to suggest if I had not chaired the meeting, and I stressed that at this stage I was not expecting the committee to come up with detailed plans for implementation.

Before the meeting closed there were two items from the floor. The members sent their condolences to the chairman on her bereavement and passed a vote of thanks to John Gilpin for his work on behalf of QUANTA. It is probably true to say that without John's willingness to step into the breach during emergencies, QUANTA would have had to be wound up some years ago.

This year's AGM was over in about an hour, but it had been a hardworking and businesslike meeting. QUANTA is making changes to ensure its future survival and the next 12 months should give us many challenges.

**H**aving been surprised that QUANTA was still going, having experienced the return to this community and being dismayed at where it was, my first thoughts were 'well this is a bit short lived, no sooner have I got back in to QLing and all it's problems (I am talking about the computer here btw), now it looks like its on it's last legs, I pondered about sitting out the year's subscription and watching it all fall away to what seemed an inevitable conclusion. At the same time because I was in a position to do so, I read loads to try and catch up on what happened and where we were in the QL community (see my previous article) while I could. Now, two things happened, firstly I possibly read too much and lost much of the information I was try to glean, secondly it was obvious to me that there were two trains of thought about having a say about 'the QL community', those who say and don't, and those who say and do. I also noted that some were saying that the QL community could still function without QUANTA, but I felt they were missing some fundamental issues here and also I thought that arguing about them has already been going on, and has already been going on far too long anyway. So what can I actually do? Technically I know a little but not enough to come up with a new QL, ideas maybe, but then so can lots of other people. So what other experiences have I had? Information overload possibly, not knowing what I don't know, making the occasional comment on the QL forum and the QL Users Mailing list, and sometimes that does get a bit heavy, but then that is what it is there for.

There are dedicated people supporting the QL who must be pretty despondent on occasions and rather just be another one lurking in the background, letting others do stuff I thought I would put my money where my mouth is and do something. So by now you will be aware of the "QL Image Repository" website for all images QL and the "Back to the QL" blog that I occasionally write up something about my own experiences. My latest offering is something that came out of my first article in QUANTA and an entry in the blog where I decided to do something for those who are interested but do not know where to start in either the Sinclair QL and/or programming in SuperBASIC

The title of the website "I want 2 learn 2" is deliberate and not QL significant, I felt that a title that reflected what someone wants to do was

# QUANTA Magazine

more appealing and describe more about what the site is actually about rather than just another QL title that would be too easy and...I've done that already thanks. Besides I polled 73 students on my games course, a range of different titles and this came out on top, as style and use of colour also play a part. I would like to think that this site is the first stop for someone totally new to the QL or someone coming back to the QL after some time, as a way of getting back into the "QL community."

## **QUANTA NEWS**

**Dilwyn Jones**

If you have QL-related news that you'd like us to include on this page, please get in touch with News Editor Dilwyn Jones at

[news@quanta.org.uk](mailto:news@quanta.org.uk)

## **GWASS ASSEMBLER NEWS**

Version 5.06 of GWASS is now available on George Gwilt's site

<http://gwiltprogs.info>

The new version allows much larger files to be assembled. There was previously a fault preventing an increase in the space allotted to user heaps. There is as well a new version of the file explaining the 68K instruction set. This contains corrections to ADDX and SUBX. It also completes the entries for CALLM and RTM. Another error fixed in this version was introduced by the addition of octal to the ways of inputting numbers. This fault would cause GWASS to crash instead of just signalling an error when a faulty string is given for a DC instruction.

## **QL IMAGE REPOSITORY UPDATE**

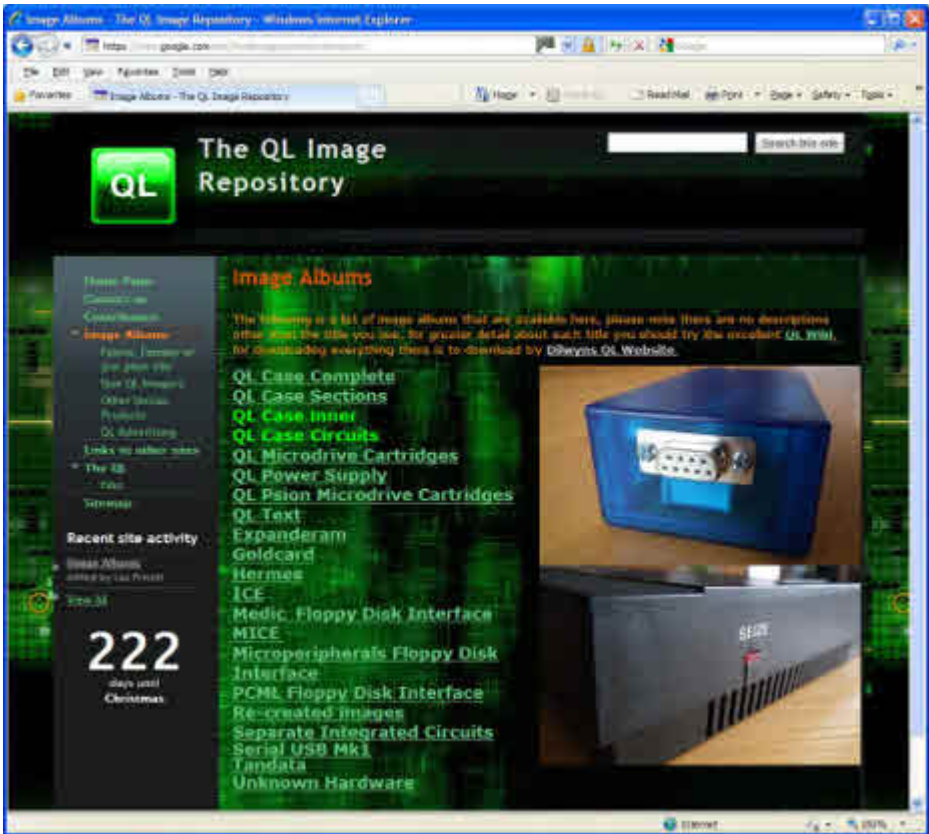
In the March issue, we published an item about Lee Privett's QL Image Repository. Unfortunately, at about the time we went to press, Lee sent us the following update:

I wondered if I might make a tiny change as I quickly ran out of space with the images I had used thus far and I have only just started, I therefore have made alternative arrangements with a nicer web based front end and subscribed to a larger capacity web space for the images.

The new website address is

<https://sites.google.com/site/theqlimagerepository/>

# QUANTA Magazine



*THE QL Image Repository*

## ANOTHER QL SD CARD INTERFACE

Miguel Angel Rodriguez Jodar writes about an SD card interface he has been working on:

“I’ve working on it the last two weeks. The hardware is almost finished (I may be switching to another, more capable, CPLD if the current one doesn’t fit all my needs).

It’s an external ROM board, with EPROM for firmware (to be written), CPLD configured to act as an SPI interface, and a SD/MMC socket.

## QUANTA Magazine

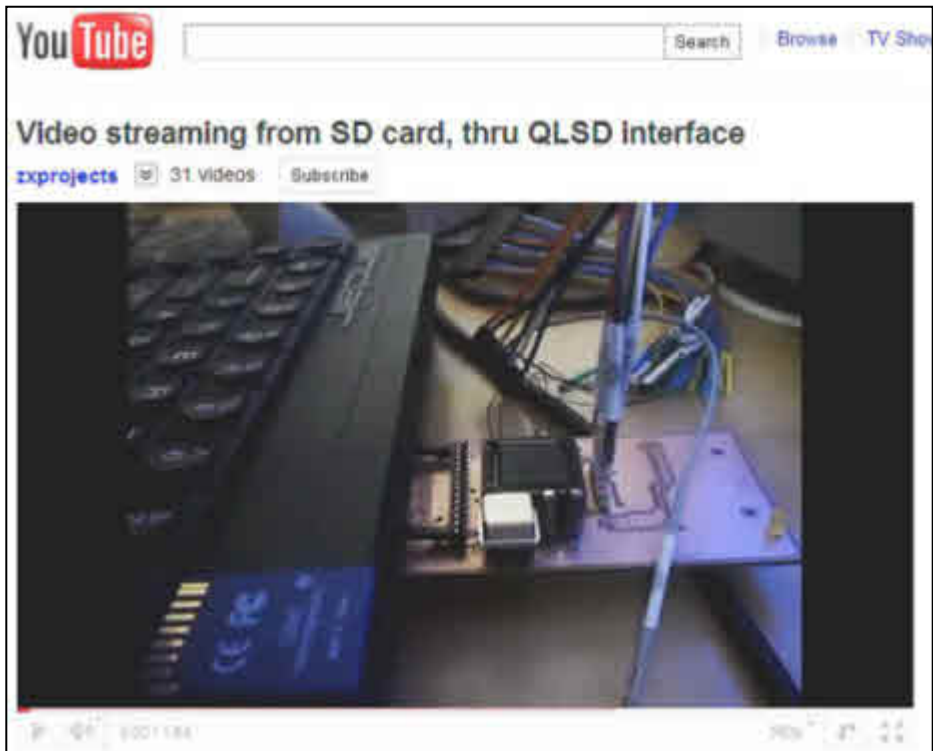
Miscellaneous electronics include an integrated oscillator (50MHz at present), and a 3.3V LDO regulator.

I'm finishing low-level routines so once they are well tested, I will move on to the next software level (file system, driver access, etc).

Until now, I present to you a demo of the read speed achieved with a white-brand SD card, and a 640KB (should work on an unexpanded too) QL with Minerva 1.98.

<http://www.youtube.com/watch?v=78xtsEKW4Lw>

This video is the last one uploaded to YouTube up to now. Previously I have uploaded two more videos showing basic read tests using different speeds, and comparing the results with the one obtained using a regular floppy drive.



# QUANTA Magazine

<http://www.youtube.com/watch?v=t0XvKy8wb-g>

*A clip from Miguel's video, showing the SD card interface plugged into a QL  
MEDIC EXPANDER CARD CIRCUIT DIAGRAM*

I've added circuit diagram of the Medic expansion interface to my website. The circuit diagram is in two parts, both PNG files. They might prove useful for someone trying to troubleshoot these fairly common QL expansions. They can be downloaded from

<http://www.dilwyn.me.uk/docs/hardware/index.html>

## BACK TO THE QL WEBSITE

A website called Back To The QL has been set up specifically for those returning to using a QL after a period away from the QL, or someone



totally new. As someone who fairly recently returned to using QLs for the



# QUANTA Magazine

first time since the late 1980s, Lee Privett says: 'The website is hopefully the first stop for someone totally new to the QL or coming back to the QL after

## *The "I Want 2 Learn 2" website*

some time, as a way of getting back in to the "QL community". The title 'I want 2 learn 2' website reflects a kind of cry for help or a plea, from a prospective QLer or even someone like myself who needs an easy introduction in to retro computing, who wants to learn a little about the QL specifically and what could be some of the benefits there are for a person of any age, or even just for fun. It is not intended to replace any of the other web sites which provide a plethora of information but to compliment them and there are many links to those sites such as Dilwyn's following the various information web pages on "I want 2 learn 2" when more information is required. '

<https://sites.google.com/site/iwant2learn2/>

I very much hope that this website will fill a niche not particularly well catered for in recent times – helping the person who finds himself/herself in a position of wanting to take an interest in the QL but finding it difficult to find the right information to get started.

## **SERUSB PROGRESS**

As the SerUsb project by Adrian Ives moves towards delivery of the first units in May, Adrian has announced that it will be available via Memory Lane Computing. A website is available at

<http://www.memorylanecomputing.com/serusb.htm>

where you can get details of the device, including downloading its documentation and programming guides. The site also has some nice pictures of the device in its attractive blue casing, showing the USB ports and flash memory card interface, and a picture of the PCB of the mark I device. Adrian also dropped hints of a second version of the device on 14th March, where he said he was looking into producing a version which could work via the ROM port (provisional description of Ser-USB++) so as not to be held back so much by the QL serial ports. He mentioned that if it all comes together it could result in a simpler, more robust and performant driver. He also added a qualifier, saying "but no promises yet."

The screenshot shows a web browser window displaying the Memory Lane Computing website. The page features the company logo and tagline "Making the computers of yesterday relevant today". Navigation buttons for "PRODUCTS", "SERVICES", "SHOP", and "CONTACT" are visible. A "Ser-USB Status" section provides information about the current driver version (1.0) and offers links to various manuals and guides. Two photographs of the Ser-USB device are shown: one of the Mark I unit and one of the Mark II unit. The Mark II unit is described as smaller and having on-board sockets for the USB cable.

Lee Privett has taken some pictures of the Ser-USB device he received (serial number 002 he would have you understand) – they can be viewed at:

<https://sites.google.com/site/theqlimagerepository/products>  
[The SerUsb page at memorylanecomputing.com](https://www.memorylanecomputing.com)

## MICRO PERIPHERALS QL DISK INTERFACE

Back in the February issue I announced that a replacement manual for the Micro Peripherals/Sinclair disk interface was available from my website. I'm pleased to say that the utilities disk for use with this interface is also now available, thanks to help from Rich Mellor and Brian Kemmett. The instructions for these utilities are in the manual for the interface itself above, although Brian Kemmett has kindly prepared a scan of just the utilities

# QUANTA Magazine



pages if you'd just like to explore the content of the floppy disk by itself,

# QUANTA Magazine

without downloading the full manual. Download it from

<http://www.dilwyn.me.uk/docs/manuals/index.html>

(on that page scroll down to the Micro Peripherals Ltd Disk Interface section.)

*A Sinclair/Micro Peripherals Ltd QL Disk Interface*

## PCML INTERFACE MANUAL

While on the subject of disk interface manuals, Lee Privett has kindly provided me with a copy of the PCML manual described in the March issue, now reduced in size to about 1.8MB (the original was about 7MB in length). Get the new version from

<http://www.dilwyn.me.uk/docs/manuals/index.html>

## SINCLAIR QL PRINTER

If anyone is fortunate enough to acquire one of the very rare Sinclair QL printers, you can now get a replacement manual for it from my website. This was quite a project and I am grateful to Urs Koenig and Lee Privett for assistance with this manual. Urs had one of these printers on display at the Swiss QL show in Lucerne, and Urs kindly scanned a few missing pages of the manual for us.



Download the replacement manual from

# QUANTA Magazine

<http://www.dilwyn.me.uk/docs/manuals/index.html>

The Sinclair QL Printer is of particular interest as it was one of the few printers ever released having a built in QL character set EPROM.

*The Sinclair QL Printer*

## TRUMP CARD MANUAL

Lee Privett's latest offering is a much improved version of the Trump Card Manual, previously available on my website as a plain text manual. Lee has now prepared a much tidier Word DOC and PDF file version of the manual. Download it from the Replacement Manuals page on my website at

<http://www.dilwyn.me.uk/docs/manuals/index.html>

- scroll down the page to the Miracle Systems Manuals section.

## QL TECHNICAL GUIDE

I have made available a searchable PDF copy of the QL Technical Guide on my website. It is on the Replacement Manuals page, Technical Guides section. I have also added the Socket API documentation for QL TCP/IP (originally from Richard Zidlicky's uQLx etc. pages, which seem to no longer exist) and the QL Service Manual.

<http://www.dilwyn.me.uk/docs/manuals/index.html#techguides>

## TOOLKIT 2 ROM IMAGE

I am very grateful to David Buckley for sending me a copy of a more up to date Toolkit 2 ROM image (version 2.20) than the existing versions on my website. This will probably be of interest to emulator users, who may not have an existing copy of Toolkit 2 with their emulator. Remember that the Toolkit 2 ROM image is still copyright of Tony Tebby, although he has given permission to supply it on a no-profit basis for use with emulators. Download it from

<http://www.dilwyn.me.uk/pe/index.html>

## LCD SCREENS WITH QL?

Q U A N T A



# Independent QL Users Group

**World-wide Membership is by subscription only,**

Offering the following benefits:

Bimonthly Magazine - up to 52 pages

Massive Software Library - All Free!

Free Helpline and Workshops

Regional Sub-Groups. One near you?

Advice on Software and Hardware problems

Subscription just £14 for Full Membership

PayPal (see QUANTA Web Site),

Cash, Cheques and Postal Orders Accepted

**\*Now in our Twenty Eighth Year\***

Further details from the Membership Secretary

**Keith Dunbar, 44, Dalton Avenue,  
Stretford, Manchester, M32 9TP (UK).**

**Tel. 07789 483 800**

**Email: [membership@quanta.org.uk](mailto:membership@quanta.org.uk)**

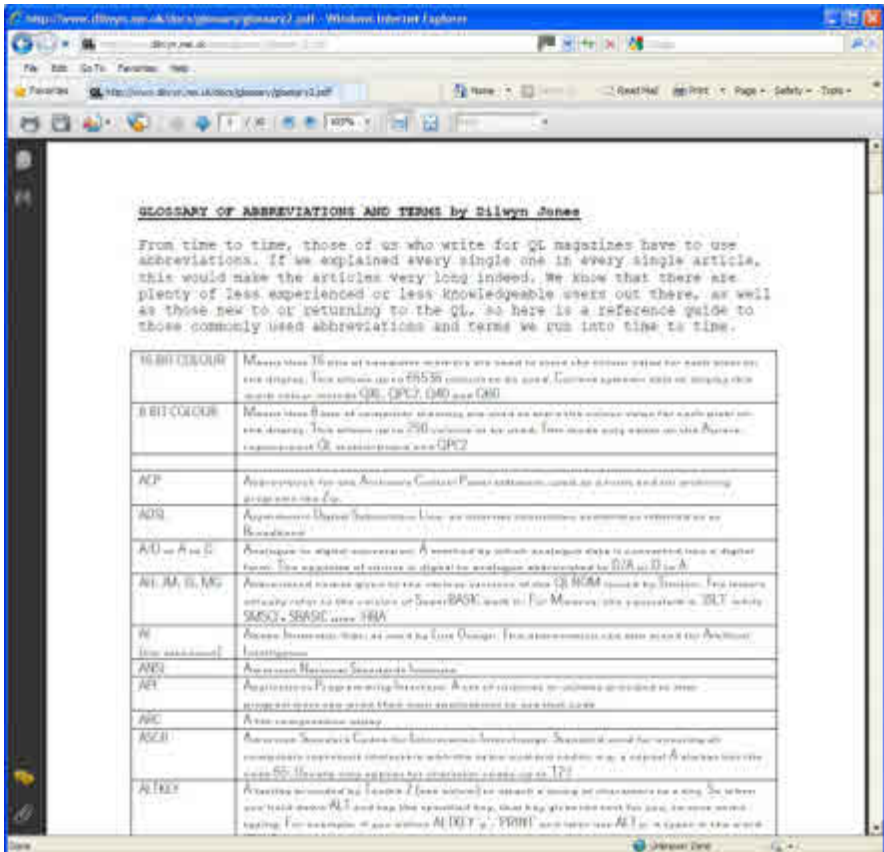
**Visit the QUANTA Web Site**

***<http://www.quanta.org.uk>***

# QUANTA Magazine

Just as this news column was going to press, I heard of a very interesting hardware development which will be of help to users of the dear old black box QL. Apparently, a company in Scotland has produced a video scalar device which lets you connect RGB or SCART video to an LCD monitor, taking care of all the signal conversion. All you need is a lead from the box to the QL, no electronics knowledge needed (it's ready built, case and all). How long have we waited for something like this? More details and pictures in the next issue, I hope.

## QL GLOSSARY UPDATED



This glossary of terms for the QL has been extensively reworked

# QUANTA Magazine

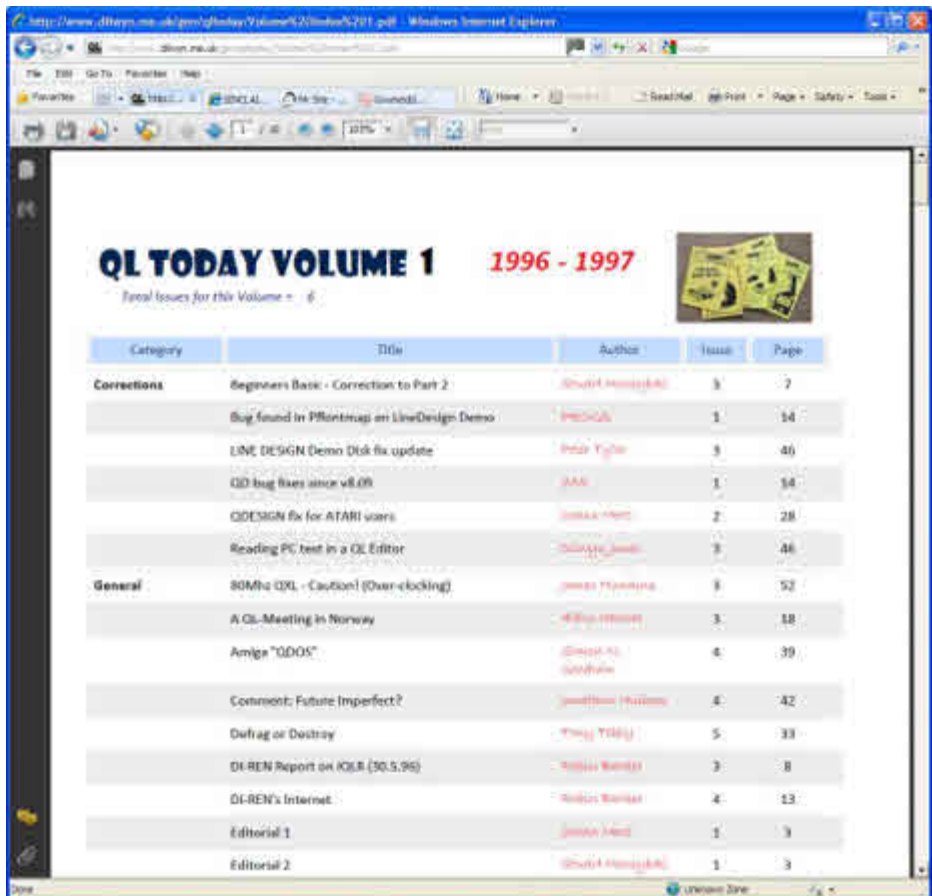
and updated. Originally published in QL Today many years ago, it is now available to download from

<http://www.dilwyn.me.uk/docs/glossary/index.html>

as a PDF file or as a Word doc file if you'd like to be able to edit it yourself.

*The QL Glossary version 2*

## QL TODAY INDEX



**QL TODAY VOLUME 1** 1996 - 1997

Total Issues for this Volume = 6

Category	Title	Author	Issue	Page
<b>Corrections</b>	Beginners Basic - Correction to Part 2	Shirley Henshaw	3	7
	Bug found in Pfrontmap on LineDesign Demo	PHOENIX	1	14
	LINE DESIGN Demo Disk fix update	John Taylor	3	46
	GD bug fixes since v8.08	JAN	1	14
	QDESIGN fix for ATARI users	James Ford	2	28
	Reading PC text in a QL Editor	Shirley Henshaw	3	46
	<b>General</b>	80MHz OXL - Caution! (Over-clocking)	James Ford	3
A QL-Meeting in Norway		Helge Østrem	3	18
Amiga "ODOS"		James Ford Derek White	4	39
Comment: Future Imperfect?		James Ford	4	42
Dfrag or Destroy		Thom Taylor	5	33
DI-REN Report on KGB (30.5.96)		Robert Worrell	3	8
DI-REN's Internet		Robert Worrell	4	13
Editorial 1		James Ford	1	3
Editorial 2		Shirley Henshaw	1	3



# QUANTA Magazine

Brian Kemmett has also produced up to date indexes (as far as volume 14 – QL Today is currently on Volume 15) of QL Today magazine. These are available as searchable PDF files for individual year volumes, or as 5 year sets to reduce download times. Get them from:-

<http://www.dilwyn.me.uk/gen/qltoday/qltoday.html>


Sample of one year's QL Today index.

## ZX81 EMULATORS CD

2011 sees the thirtieth anniversary of the launch of the ZX81 computer by Sinclair. Many of us cut our programming teeth on the little black wedge in 1981, wobbly 16K RAM pack and all. Despite that, I still have fond memories of the little black computer with the flat touch keyboard.

To this day, there are plenty of ZX81 emulators available on platforms as diverse as the QL, Windows, Linux, Atari and Macs. There's hundreds of free programs you can download from the Internet too. So I decided to put together a ZX81 Emulators CD with all the stuff I could find on it, including Xtricator emulator for the QDOS and SMSQ systems, Xtender for Windows and quite a few more emulators. And just for good measure I threw in ZX81 manuals, games and other software!

It is available to order now from Quo Vadis Design's website, price just £5.00. A copy of the ZX81 keyboard layout is included both on paper and as a graphic file on the CD. Let's just say I find it essential, as I just can't

<p><b>ZX81 Emulator for QDOS and MSDOS</b></p> <p>Many of us had a Sinclair ZX81 as a first computer. This CD gives you the chance to relive those heady days of just 1.5KB RAM, Z80 processor and single-key keyboard entry by installing a ZX81 emulator on your QL or PC!</p> <p><b>Xtricator v1.75 for QDOS systems (Shareware)</b></p> <p>Xtricator is a Z80 emulator in a ZX81 environment, written for the Sinclair QL and clones. It works in standard QL or high resolution. <i>Written entirely in assembler for compact, fast and efficient code.</i> It features a highly compatible simulation of the Z80 processor, allowing 99% of ZX81 programs to run. Even emulates the ZX printer with direct output to QL printer or to file. Supports double width ZX81 screen in normal or inverse colour. Two ZX81 keyboard layouts supported. Uses the popular 'p' ZX81 snapshot file format making it compatible with many other ZX81 emulators on other computers.</p> <p><b>Xtender v1.28 for MSDOS/Windows systems (Shareware)</b></p> <p>Xtender is an emulator of the Z80 processor in a Sinclair ZX81 environment, written for PC's with a standard graphics adapter ( Hercules, CGA, EGA, or VGA). The Z80 Emulator is able to execute programs written in the Z80 machine code language. The ZX81 environment includes the original ZX81 ROM and additionally takes care of hardware compatibility (e.g. keyboard reading, screen output control and redirecting of signals, originally handling for devices such as tape and printer). Xtender is written entirely in Assembly language for best performance.</p> <p><small>Emulator CD CD from Quo Vadis Design, 27 Pavilion, Brixton, London SW8 5NQ</small></p>	<p><b>ZX81 Emulators</b></p> <p>for QDOS and MSDOS/Windows</p>  <p>Xtricator v1.75 for QDOS and SMSQ/E systems Xtender v1.28 for MSDOS/Windows systems plus loads of programs to run on the emulators!</p> <p><small>A ZX81 WWW CD for QDOS and SMSQ/E systems, by Dilwyn Jones</small></p>
--	--

# QUANTA Magazine

understand how I coped with the single keyword entry system at the time, let alone on an unlabelled PC or QL keyboard now!

Our very own Rich Mellor has ZX81 support pages on his website at

<http://www.rwapsoftware.co.uk/zx812.html>

*ZX81 Emulators CD*

## **PSION QL PROGRAMS – LATEST VERSION**

With grateful thanks to Rich Mellor for helping me get working copies of these, I have now been able to put what I believe to be the most recent British versions of Abacus(v2.35), Archive(V2.38), Easel(V2.35) and Quill(V2.35) onto my website now, so that if you have an earlier version, or would just like to add them to your collection, they are here to download.

<http://www.dilwyn.me.uk/psions/index.html>

Please be aware of course that this software is still copyright of Psion, although they do allow free distribution of this old QL software on a non-profit basis.

## **GOLD CARD BATTERY REPLACEMENT UNITS, ATX POWER CONTROLLER AND MPLANES**

Dave Park in Texas reports that his project to make a small board to take a replacement Gold Card battery has been delayed in part due to illness and in part due to some out of spec components he received. This quote is taken from an email from him received at the end of April, where he apologised for the lateness because of his illness, and went on to describe progress with the various hardware units:

“On the bright side, The SAFT battery replacement PCBs for Gold Cards have arrived and they're perfect. On the downside, the bulk pack of sockets I ordered do not match the specs listed so I have RMA'd them. They were 0.7mm too tall and the SMD pads were not as specified on the drawing.

The ATX power controller design is well tested now, and samples have been sent to two people here in the US to use in real-world situations - as much to test the instructions and packaging as the controller itself.

**A**t the end of the financial year 2010, I was more than a little concerned to see from the Income and Expenditure Account that the “Bottom Line” for the year resulted in a loss of £516.

Over the last few years it has not been unusual to report a small loss (about £60 to £100 per year) and we have been able to correct this by reducing our expenditure (reduction of committee expenses, and reducing the number of workshops from two per year to one per year). Due to previous reductions in our expenditure it has now got to the point where there are no further reductions possible in the expenditure so the only way to balance the “bottom line” is to increase the income. Our only income over the past few years, other than subscriptions, has been from the sale of second user QL items which have been donated to QUANTA either as a result of the death of the member or when QL users have decided not to continue with their support of the QL. Our stock of second user parts is now virtually exhausted and the income from this source has thus significantly reduced

Another problem facing QUANTA is that of falling membership numbers and currently there are only 172 members including Associate, Honorary and “Other” members. This has to be measured against a peak of membership numbers of over 1500 some years ago. In order to balance a loss of £516 it is now necessary to increase our subscription rate. I am lead to believe that subscription rates have not changed since QUANTA was founded in 1984 but now it has become absolutely necessary to raise the subscription level. So by how much do we need to increase the subscription? Had the subscription level been increased every year since 1984 in line with inflation (about 2.5% at best and some years have been significantly more), our current losses would have been considerably reduced, if not converted into a moderate profit.

Due to our methods of collecting member’s subscription, one large increase is far easier to administer than a number of smaller ones. Quite a high proportion of members pay by standing order and the mandate for this would require changing at the bank every time the subscription changed. Information prepared in March 2011 for the member’s forum at the AGM in April – see QUANTA Magazine V28 I2 March 2011 Page 21 – showed that an increase of 1% per annum would have resulted in a current subscription of over £18.00 while the sums collected from the higher membership numbers would have given us somewhat more “wool on our back”. Had we increased our subscription by 2% per annum (nearer to the inflation rate) the subscription rate

# QUANTA Magazine

would currently be £23 per annum – with considerably more “wool” in our Accumulated Fund. In order to strike a balance and to see what effects such changes make, it was proposed and accepted at the AGM 2011 that the subscription should be raised in January 2012 to £20.00 per annum and to maintain the current level of Postage Surcharge for both Europe and Rest of the world until any increases are announced by Royal Mail in April 2012. Any increases will be passed on to our members starting with subscriptions and postal surcharges levied from January 2013.

Although it is regrettable that this increase is necessary in order to allow QUANTA to remain a viable Association I think that the majority of our members will agree that an increase in subscription is unavoidable at this point in time.

The practice of having two subscription years, one starting in January and the other starting in July causes extra work in the preparation of the annual accounts which run from January to December each year in that to get nearer to an accurate figure it is necessary to create a Prepayments account for half the subscriptions and postage surcharges paid in July each year. It has been proposed and agreed by the members at the AGM 2011 that there will only be one subscription year starting in January each year. This means that those members who currently have a July subscription year will enjoy a subscription holiday from July 2011 to January 2012. Those members who pay by Standing Order in July each year should make every effort to amend their Standing Order Mandate at their bank branch or on line if they have this facility to make the payment of £20.00 plus the postage surcharge of £5 or £8 depending upon where your paper magazine is delivered to (Europe or Rest of the world respectively) and also to change the payment date to 4th January annually. These changes must be made BEFORE the end of the current July Subscription Year (in fact as soon as possible so that your subscription is NOT paid in July this year.

These changes will help the QUANTA Committee Members to streamline their tasks on the committee and hopefully become more efficient in whatever it is they do.

Finally, you may have noticed that my Treasurer’s report as printed in the March issue of QUANTA Magazine pages 35 and 36 contained two copies of the Audited Income and Expenditure Account for the year ended 31st December 2010 instead of one I & E Account and one Balance sheet for the same period. I have therefore elsewhere in this issue, included the Audited Accounts as they should have been printed with my apologies for any inconvenience caused.

# QUANTA Magazine

## QUANTA Balance Sheet as at 31st December 2010.

£	2009 £		2010 £	£
		<b><u>CURRENT ASSETS</u></b>		
	0	Prepayments and Debtors (RWAP Loan)	1,635	
		<b>Bank Accounts:-</b>		
	79	Current Accounts & PayPal Account	673	
	9,846	Deposit Account	7,215	
	<u>0</u>	Cash In Hand	<u>14</u>	
	9,925			9,537
		<b><u>CURRENT LIABILITIES</u></b>		
	468	Accrued Charges and Creditors	596	
	<u>468</u>			<u>596</u>
	<u>9,457</u>	<b>NET CURRENT ASSETS</b>		<u>8,941</u>
	<u>9,457</u>	<b><u>TOTAL ASSETS</u></b>		<u>8,941</u>
		<b><u>FINANCED BY ACCUMULATED FUNDS</u></b>		
	12,507	Balance brought forward	9,457	
	<u>-3,050</u>	Surplus/(Deficit) of Income for the Year	<u>-516</u>	
	<u>9,457</u>		<u>8,941</u>	

### **AUDITOR'S REPORT TO THE MEMBERS OF QUANTA:**

I have examined the Income and Expenditure Account and Balance Sheet for the year ended 31st December 2010 and confirm that they are in accordance with the books and vouchers of the Association and the explanation and information provided.

Signed: Elizabeth Armstrong  
 Name & Address:... Elizabeth Armstrong  
 32, Westmorland Road,  
 Urmston,  
 Manchester. M41 9HL

# QUANTA Magazine

## QUANTA Income and Expenditure Account for the Year Ended 31st December 2010.

£	2009 £		£	2010 £
		<b>INCOME</b>		
	2,460	Subscriptions		2,234
	26	Credit Card Charges		34
	1,578	"QL is 25"		0
	<u>498</u>	Donations		<u>363</u>
	4,562			2,631
6		Interest Received	3	
<u>2</u>		Less: Taxation (Plus refund)	<u>-1</u>	
	<u>4</u>			<u>4</u>
	<u>4,566</u>			<u>2,635</u>
		<b>EXPENDITURE</b>		
	1,317	Magazine Printing Costs		1,624
	423	Magazine Postage Costs		525
	<u>50</u>	Sundry Purchases (+ Sale of Assets)		<u>0</u>
	<u>1,790</u>			<u>2,149</u>
		<b>OVERHEADS</b>		
	0	Subgroup Support		100
	264	AGM Costs		447
	628	Committee Meetings		20
	0	Workshop Costs		0
	400	Committee Member's Expenses		177
	-6	Royalties Payable		0
	110	Insurances		110
	4,292	"QL is 25"		0
	117	Accountancy & Audit		120
	<u>21</u>	Bank & Credit Card Charges		<u>28</u>
	<u>5,826</u>			<u>1,002</u>
-3,050		<b>SURPLUS / (DEFICIT) FOR THE YEAR</b>		-516
-3,050		<b>To/(From) QUANTA Accumulated Fund</b>		-516

John Gilpin (signed)  
Honorary Treasurer.

**A** QL workshop and QUANTA Annual General Meeting took place in Manchester on 16th and 17th April 2011. The Endeavour scout hall made for a rather large venue for the number attending, but the atmosphere was friendly and relaxed, and the talks and presentations room was usually full for the varied events which took place there during the weekend.

QUANTA had the usual stand there, Rich Mellor brought an assorted variety of second user hardware, as did Derek Stewart. John Southern and his family together with David Buckley ran a successful QL A&E department, breathing new life into otherwise broken QLs and assorted hardware. To mark the 30th year of the ZX81 computer (on which some of us cut our programming teeth!) a CD was launched with ZX81 emulators for various platforms (including QL).

It had been hoped to show and discuss the new QUANTA website, but delays in migrating the current website and Content Management System over to the WEC host site had meant the work could not be completed on time.

Geoff Wicks hosted the first of the day's talks, when he demonstrated Roger Godley's recent work in enhancing the QL Xchange software to display new colours on GD2 systems. Roger has already done work on the separate Psion QL programs which have been available to QUANTA members from QUANTA Library, but now he has turned his sights on Xchange and is anxious to see his work made available to everyone. He also showed a quick preview of Roger's new paint program for GD2 systems. Geoff hopes that these will be available on his Just Words! website a little later in the year when he has had a chance to revise and update the site.

The second talk brought something that little bit different - robots! David Buckley has had a long standing interest in robotics and he brought three little robots with him to the event. One of them was a Zero 2 robot, which can be connected to a QL via a serial port. Back in the 1980s David had written some software on a QL to simplify the use of these robots. The QL's turtle graphics and the possibility of defining new procedures and functions in SuperBASIC made it straightforward to write software on a QL to effectively control the robot.

# Sinclair QL Re-Releases RWAP Services

We have been working hard to safeguard the future of the Sinclair QL through beginning to compile a repository of QL titles.

The repository enables people to see what software was produced for the Sinclair QL and also to be able to purchase working copies when their microdrive cartridges fail. Where we can, we obtain permission from the copyright holder to re-release items on the market.

This has enabled us to bring some of the titles back to the market as well as re-kindle interest in the Sinclair QL and its emulators.

Old favourites brought back to life include:

- Jungle Eddi
- The Lost Pharaoh
- Pengi
- Microdeal's Flight Simulator
- Microdeal's QL Hopper
- Microdeal's The King
- Cuthbert in Space

We still retain our existing catalogue, including:

- Open Golf
- Stone Raider II
- Hoverzone
- Deathstrike
- Flightdeck

All games are available on disk or for use with Q-emulator on the PC for **ONLY £5 each.**

Microdrive versions also available - £10 each

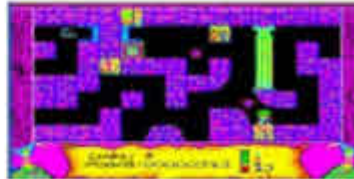
Visit the QL Wiki for more details on software, books and hardware for the Sinclair QL:  
[www.rwapadventure.com/ql\\_wiki](http://www.rwapadventure.com/ql_wiki)

**RWAP Software**  
3 Dale View Court  
Fulford  
Stoke-on-Trent  
Staffordshire  
ST11 9BA  
Tel: 01782 398143  
Email: [rich@rwapservices.co.uk](mailto:rich@rwapservices.co.uk)  
Website:  
[www.rwapsoftware.co.uk](http://www.rwapsoftware.co.uk)  
or [sellmyretro.com](http://sellmyretro.com)

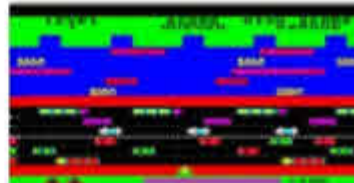
Working to safeguard the QL for the future [www.rwapsoftware.co.uk](http://www.rwapsoftware.co.uk)



QL Pong by Jochen Merz



The Lost Pharaoh by Talent



QL Hopper by Microdeal



The King by Microdeal



Cuthbert in Space by Microdeal



# QUANTA Magazine

Back in the 1980s there was a lot of interest in the Logo programming language and his QL program made it easy to define movements for the robot, e.g. 4 turns and 4 straight lines of given length with the robot's pen down for drawing a square can easily be described in Turtle Graphics commands like this. Imagine writing a routine to do this descriptively: move to start position, pen down, forward a given distance, turn through 90 degrees, forward the same amount, turn through 90 degrees again and so on until the square was drawn, then lift the pen and send the robot back to its original position, turn round to unloop the cable if necessary and so on. Individual routines such as this can be combined to simplify larger programs, a bit like QL procedures and functions in many ways. Here's a little example of what such a little routine might look like to draw squares (bearing in mind I never learned the Logo language this might not be strictly correct, but it should give an idea of what I'm talking about):

```
To Square
Pendown
move 50
turn 90
move 50
turn 90
move 50
turn 90
move 50
turn 90
penup
end
```



While this sort of thing might seem trivial at first glance, it can help you learn a little bit about basic robotic principles and programming techniques to build up your skills. These types of little robots can have drawing pens attached, white line followers, light, beeper, trailer connection/disconnection, bump sensors or "whiskers" to detect obstacles and so on. In fact, the way David described this I found myself imagining programming such a device to move around a room, beeping and flashing a light to warn the cat to move out of its way when they meet, coping with furniture left in various random positions by its human housemates, remembering where it had travelled, working out the shortest route back to its parking spot, turning around to untangle its own cable when required and so on. Despite that sort of thing seeming nothing more than playing with a little robot, it isn't that much of a step up to programming robots to move about safely and effectively in warehouses and factories, for example. And when you realise you can already buy lawn mowers which mow the lawn by

# QUANTA Magazine

themselves without also mowing next door's lawn or getting lost behind your garden shed, and finding their way back to the charging position when batteries start to go flat, sending a message to your mobile phone if it gets into difficulties and so on, you start to realise there are plenty of real-world practical examples of why learning some robotics basics can actually be quite a sensible career move too if you are interested in this type of thing.

Chairman Sarah Gilpin had been called away for the weekend due to her father's illness and later on the Saturday we heard that her father had passed away during the day. I'm sure we all wish to send her our condolences at her loss.

Saturday evening saw us get together for a meal at the Pond Quay restaurant in Urmston. The atmosphere was a bit muted after hearing the news of the Gilpins' bereavement, but the occasion managed to strike a balance between respect in view of the news and having a lovely meal and chat. What's more, a certain magazine editor did not try to walk away with a napkin this time.

Sunday morning saw us get back together for the second day of the meeting. Geoff Wicks chaired a session on looking at the suggestions for changes in the QUANTA constitution to iron out potential problems and also to try to make it suitable for the future as QUANTA starts to move towards 30 years of the QL by 2014. Rich Mellor, who trained as a company lawyer, is helping to redraw the constitution and a small group will be looking at producing a new draft constitution over the summer ready to discuss and eventually put to the membership to vote on acceptance at the AGM next year. Examples cited of problem areas in the constitution include the fact that for many years it has mentioned the Sinclair QL and Thor in its "Objectives" section, while clearly times have moved on and there are many other QL compatible computers and emulators not mentioned by now. It's also hoped to tackle improving the wording in some areas, and of course the difficult issue of the term of office of QUANTA officers on the committee. How times have changed there - back in the 1980s I remember reading magazine articles which commented on how home computing was an almost exclusively male preserve then, while in recent times a majority of the Officers on the committee have been female!

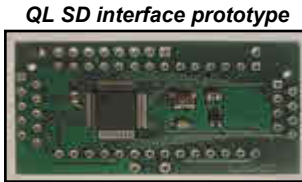
Rich Mellor gave a talk about his work in seeking to preserve QL software for the future and the difficulties he has tackled such as making one good copy out of two or three damaged copies of rare old QL software.

# QUANTA Magazine

He had some QL arcade style games running on a demo QL on his stand and it drew a lot of interest from those passing by (including some Scout group members meeting in a nearby room who wandered into the QL show to see what was happening and "what this QL thing was"). Sales of a QL games CD on an adjacent stand seemed to benefit! He also talked about his QL Wiki site, which provides a valuable source of information about QL hardware and software. Simply by registering, QL users can add new information and amend existing pages to provide an extensive reference source of information for us all.



SD card inserted  
at MDV2 slot



*QL SD interface prototype*

*Baseboard*



*How card slot PCB is added  
in MDV2\_ position inside the  
case.*



*Windows 7 emulated in QPC2? Surely not....*

Derek Stewart showed some pictures of Peter Graf's SD card interface for the QL, which sat in the position occupied by MDV2 (allowing

# QUANTA Magazine

insertion of an SD card through the existing MDV2 slot in the QL case), with a small ribbon cable leading further into the QL to connect the second half of the unit to the QL itself at the EPROM slot. If preferred, the SD card connector can be positioned externally. Only SDHC cards are supported (these are very common). The driver software will be free and open source, although it has not yet been developed.

Lee Privett showed off his alpha test version of Windows 95 running in a QL emulator on a PC. In case anyone saw this and didn't realise it was a spoof, the only Windoze 95 actions it recreated were the "blue screens of death" when a PC crashes! This was then followed up by someone else running QPC2 with some screen copies of a Windows 7 desktops used as BGIMAGE wallpapers in QPC2, giving the impression that Windows 7 was running under QPC2 rather than QPC2 being the emulator! The things some people get up to at QUANTA workshops...

The AGM came along at 2 pm, and in the absence of the Chairman, the committee used existing provision in the constitution to ask Geoff Wicks to act as Chairman of the AGM in view of his experience. The motions put to the AGM were all carried, and the new committee elected as follows:

Chairman - Sarah Gilpin - Now in her third Year as Chairman and may well be required to stand down at next year's AGM (depending upon the conditions of the QUANTA Constitution currently being revised.)

Secretary - Alison Southern -  
(whose term of office may also be queried at the AGM in 2012.)

Treasurer and Membership Secretary - Keith Dunbar -

Committee members: Dilwyn Jones (News Editor and Helpline), Lee Privett (Who has volunteered to take on the role of QUANTA Magazine Editor a role which will be discussed and finalised at the Committee meeting to be held immediately following the AGM.)

Dan Abbott, Keith Dunbar and David Buckley all remain on the committee and each retains his previous role as Web Master, Web Administrator and Librarian (recently changed from Assistant Librarian on Dilwyn Jones' resignation from this role) except that Keith Dunbar takes the Officer's role of Treasurer and Membership Secretary in addition to his role of Web Administrator.

# QUANTA Magazine

Lee Privett was welcomed to the committee, as a new member from Southend. Apart from being the only committee member living in the south of England, he is someone who has fairly recently returned to using a QL for the first time since the late 1980s after some nostalgia upon stumbling across QUANTA's website and discovering that a QL scene still existed. We hope that his experiences of returning to the QL scene, re-learning a lot about the QL and so on will help bring new ideas for reaching out to former QL users and those interested in retro computing, for example. To show his enterprising spirit, he had his QL connected to an LCD monitor. How many times have I thought this to be impossible? I've asked him for further details for the next issue...

The AGM voted to redraft the constitution in the coming year, present it to the membership for discussion during the year and to work towards putting it to the membership for approval at the AGM in 2012.

The rather difficult issue of the need to raise the membership fee was also discussed. The Treasurer's report had explained that QUANTA had a deficit of over 500 pounds in the year 2010-11, plus there was a need to finance the move to a paid-for website service with WEC this year. There was a suggestion that together with raising the membership fee (for the first time since QUANTA was set up in the mid 1980s - how many organisations can boast of no rise in over 25 years?!) QUANTA should look at the practicalities of offering a discount if members elected to commit to a 3-year subscription paid in advance, for example, to soften the impact of the rise in subscription fees. While the change may prove painful in the short term, it will help to keep QUANTA as a viable organisation financially for some years.

Pictures from the meeting: Here are some of the pictures I took at the meeting. Remember that non-members are welcome to attend the workshops which are sponsored by QUANTA!



Geoff Wicks during his presentation



A relaxed Rich Mellor during his presentation

# QUANTA Magazine



*David Buckley and his little robot friends*



*The Zero-2 robot under QL control*



*An uncased HxC SD card interface attached to a Trump Card QL.*



*An example of a Zero 2 being controlled by a QL Programme*



*New committee member, Lee Privett*



*A picture taken at the evening meal on the Saturday.*

**M**embers wishing to submit Helpline requests via email can use the email address [Helpline@quanta.org.uk](mailto:Helpline@quanta.org.uk) or if you prefer to use traditional post, please send the Helpline request to me via the address printed inside the front cover of the magazine. Obviously, we cannot guarantee to answer every query we receive, but we will do our best! Where we have been unable to answer the queries, we may print the help request as an open request in the magazine to ask if any of the readers can come up with a solution. And, of course, if readers feel that they have a better solution than we came up with, or would like to correct any errors we make, please write to us!

**Q.** I need to find a routine to sort large amounts of whole numbers very quickly in BASIC. I have tried bubble sorts, shell sorts, quicksorts and so on but they all seem to be so slow in BASIC.

**A.** Try Steve Poole's "Tally Sort" routines. They were published in three issues of QL Today magazine some years ago. The original article was published in Volume 2 Issue 1 page 40 of QL Today, a very short and simple listing complete with a demonstration. At the time its simplicity deceived me into thinking it was an April Fool joke, as by coincidence it had arrived on April 1st and the name (Tally) was suspicious as I lived in a village called Talybont at the time. I should have known better! It was actually the fastest integer sorting routine I had seen running in BASIC.

The next instalment was about a sort routine called Radix, which could be used to sort numbers or strings. Steve described that as an 'arborescent' sort routine (the name chosen because it was related to a sorting technique called 'tree sorting'). This article was in QL Today Volume 2 issue 3 page 6.

Then, in Volume 9 Issue 1 page 47 Steve and Bruno Coativy set about to produce a machine coded demonstration of the Tally sorting technique, which pushed up the sorting speed to about 200,000 numbers per second on his computer at the time!

But for most purposes the BASIC version will be fast enough, apparently able to sort up to 32766 numbers in 10 seconds on a Super Gold Card. I've asked Jochen Merz & Steve Poole for permission to reproduce the original Tally Sort listing here:

# QUANTA Magazine

```
100 REMark TALLY-sort by S. Poole v25 Mar 97
110 CLS : ct = 0 : n = 1000 : pr = 1 : REMark n maximum is 32766
120 DIM x(n),y(n) : d1 = DATE
130 FOR f = 1 TO n
140   j = RND(n) : IF pr : PRINT j!!
150   x(j) = x(j) + 1
160 END FOR f
170 IF pr : PRINT \\
180 FOR f = 0 TO n
190   j = x(f)
200   IF j THEN
210     FOR k = 1 TO j
220       ct = ct + 1 : y(ct) = f
230       IF pr : PRINT f!!
240     END FOR k
250   END IF
260 END FOR f
270 PRINT\\DATE-d1
```

The listing sets up a list of random numbers in lines up to 160 in the array x(), then the Tally Sort itself takes place in lines 180 to 260, by building up a tally using the array y(). The simplicity is a little deceptive and it can be a bit hard to follow what's going on despite the short number of lines. But, believe me, it works, although it needs a fair bit of memory for the Tally array. In fact, while preparing this article I happened to ask Steve if the technique could be adapted for use with strings in any way. I wasn't confident, as I knew that this routine relied on numeric values. Steve at first also thought it might not be possible, but I wondered if Steve would be as tenacious as ever in designing miraculous little BASIC listings in his usual style. Over the next few weeks we corresponded fairly continuously about this as Steve tackled this challenge with his usual vigour. In time, I hope he will present an article on it and if his new string routine is anywhere near as fast as his numeric sort routines, I think we could well be re-writing the book on sorting algorithms!

**Q.** What is the wiring for a QL with USA-style 9-pin D sockets?

**A.** I'm grateful to Dex on the QL Forum for the answer to this one. Although the sockets look like the equivalent serial port sockets on a PC, the wiring is not the same:



# QUANTA Magazine

English QL (RJ connector):     German/American (9 pin Canon):

6 -----	5 (+12 V)
5 -----	9 (CTS SER1, DTR SER2)
4 -----	4 (DTR SER1, CTS SER2)
3 -----	8 (RxD SER1, TxD SER2)
2 -----	3 (TxD SER1, RxD SER2)
1 -----	7 (GND)

Pins 1, 2 and 6 are not connected on the 9 pin Canon connector.

**Q.** I need to send an email with a very long web address in it. The last time I tried to send one to the mailing list, it got broken into two and people weren't able to click on the link. Is there a way around this?

**A.** One solution for emails can be to enclose the URL with < and > symbols, e.g. <URL> . This flags it as a URL or web address and so prevents it being chopped.

An alternative is to use a URL shortening service, such as [www.tinyurl.com](http://www.tinyurl.com) (there are several of them on the Internet). TinyURL quote the example on their website of how to convert something fairly unreadable like [http://www.amazon.com/Kindle-Wireless-Reading-Display-Globally/dp/B003FSUDM4/ref=amb\\_link\\_353259562\\_2?pf\\_rd\\_m=ATVPDKIKX0DER&pf\\_rd\\_s=center-10&pf\\_rd\\_r=11EYKTN682A79T370AM3&pf\\_rd\\_t=201&pf\\_rd\\_p=1270985982&pf\\_rd\\_i=B002Y27P3M](http://www.amazon.com/Kindle-Wireless-Reading-Display-Globally/dp/B003FSUDM4/ref=amb_link_353259562_2?pf_rd_m=ATVPDKIKX0DER&pf_rd_s=center-10&pf_rd_r=11EYKTN682A79T370AM3&pf_rd_t=201&pf_rd_p=1270985982&pf_rd_i=B002Y27P3M)

into an equivalent URL like "http://tinyurl.com/KindleWireless" which is of course easier to read and cut and paste into an email!

**Q.** I have just started using QL2K and need to get a copy of unzip into it. I tried the "self extract" version of unzip, but couldn't get that to work. I then tried saving a copy of QL unzip to Windows and transferring it to the emulator, but now when I try to EXEC it, it just comes up with an error message with the words "bad parameter". I appreciate that sending QL programs to emulators in a zip file helps avoid the file headers being lost, but this is totally pointless unless I can get Unzip itself across to the emulator in a usable form – catch 22!

**A.** Indeed. What went wrong is the usual problem of Windows not understanding QL file headers and simply losing them. When you copied the Unzip program to Windows then to the emulator, it lost its file header, so the QL could not execute it. The rather cryptic "bad parameter" message in this case just means file header missing from the QL program.

# QL Today Subscription

As you can see, we plan ahead for Volume 16 of QL Today.

You can subscribe by using this form (or a copy of it), or subscribe online via [www.QLToday.com](http://www.QLToday.com) (the form can be downloaded), by email, letter, fax etc. ... we are flexible!

I hereby subscribe to **QL Today** for 4 issues of Volume 16. The total price for all four issues is as follows, including postage and packing (depending on destination)

Destination	price
<input type="checkbox"/> Germany	EUR 29.90
<input type="checkbox"/> Rest of Europe	EUR 32.90 or £29.90 (UK)
<input type="checkbox"/> Rest of World	EUR 37.90

Please charge my credit card:     VISA     MasterCard     Diners Club

Expires   -

Card Verification Code:

- Money transfer to one of the following accounts:
- Deutschland: Jochen Merz, Account 493 50 431, Postbank Essen, BLZ 360 100 43
  - Österreich: Jochen Merz, Account 85055317, PSK Wien, BLZ 60000
  - Switzerland: Jochen Merz, Account 60-690080-4, PostFinance, Clearing-Nr. 09000
  - The Netherlands: Jochen Merz, Gironummer 3258439, Postbank NL Amsterdam
  - and from all other countries in EUR with IBAN and BIC to account  
Jochen Merz, Deutsche Postbank AG, IBAN: DE21 3601 0043 0611 1004 37 / BIC: PBNKDEFF 360
  - UK customers can pay £29.90 (price based on exchange rate at print time, valid until June 2011) to  
Jochen Merz, Account 83795395, Citibank UK, Sort code 30-00-45  
or send cheques in £ - no fee for UK sterling cheques (payable to *Jochen Merz* only)!

Payment via Paypal: Log into your paypal account and send the money (in EUR) to [paypal@J-M-S.com](mailto:paypal@J-M-S.com)

Name: \_\_\_\_\_

Street: \_\_\_\_\_

Town: \_\_\_\_\_

City: \_\_\_\_\_

Country: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Date, Signature \_\_\_\_\_

Please fill in and send to Jochen Merz Software, Kaiser-Wilh-Str. 302, 47169 Duisburg, Germany.  
or Fax to +49 203 501517 or scan & Email to [SMSQ@J-M-S.com](mailto:SMSQ@J-M-S.com)

Kunden aus Deutschland mit Auto-Verlängerung und Bankeintrag brauchen - wie immer - nichts zu tun!

Back-issues of all Volumes of QL Today are also available. If you search for a specific issue, please let us know. If we do not have it, we will re-print it for you. If you want more back-issues, the per-issue price goes down as the postage plays a major part in the pricing. Even German back-issues are still available (from the first years of QL Today).

# QUANTA Magazine

Here is a short BASIC program to run on the emulator which will repair the damaged Unzip program. It is written for use with Unzip version 5.32. For other versions of Unzip you may need to change the value of "fl" in line 120 to the file length (in bytes) of the version of Unzip you are using (check it on your QL before you transfer it to Windows!). Basically, all the program does is load Unzip into the common heap memory, then uses an SEXEC command with suitable values to restore the lost file header.

```
100 REMark restore Unzip v5.32 executable file header
110 :
120 fl = 108460 : REMark length in bytes of this version
130 ds = 51270 : REMark dataspace in bytes of this version
140 :
150 REMark reserve some space to "fix" the file in memory
160 REMark use ALCHP in place of RESPR in next line if you have
ALCHP
170 base = RESPR(108460) : REMark file length of Unzip
180 :
190 REMark change 'flp1_' to drive name required for loading UNZIP
200 LBYTES flp1_unzip,base
210 :
220 REMark change 'ram1_' to drive name required for saving UNZIP
230 SEXEC ram1_unzip,base,fl,ds
240 :
250 REMark if you used ALCHP in line 150 above,remove REMark in
next line
260 REMark RECHP base
270 PRINT #0,'Program finished.'
```

## QL GRAPHICS

Dilwyn Jones

This is an article for readers who are not used to using high resolution and high colour displays. It doesn't go into too many specifics, just aims to give you a base level of information, to help you get started if you are thinking of trying to make use of the new systems.

Once upon a time, there was the QL. It had a 512x256 pixel screen and displayed 4 colours. Simple. It could also display 256x256 pixels in 8 colours. Also pretty simple.

The word 'pixel' means a 'picture element', or if you must "a dot on the screen".

# QUANTA Magazine

The fact that the QL could display up to 512 pixels across in the 4 colour mode also meant it could display up to 85 text characters per line. QL text characters occupy 6 pixels across and 10 down in the smallest character size (both including a little spacing of one pixel between rows and columns).

However, things are no longer that simple! Machines such as the Atari ST's QL emulator cards, QXL, Aurora, Q40/Q60 and various QL emulators came along over the years and changed the rules a little. So the QL graphics are not quite as easy to master these days!

The various designers of the various systems have added more pixels to the QL display and a little later they also added more colours. Eventually even a new window manager came along. Many of these new facilities need the SMSQ/E operating system (more about this at the end of the article).

## STANDARD QL MODES

The QL as originally sold in 1984 has two display modes. One, called MODE 4 (or sometimes MODE 0) uses up to 4 colours and 512 pixels across, 256 pixels down. The other, called MODE 8, has 256 pixels across the screen, 256 pixels down the screen, and can display up to 8 colours on the screen. This is fixed. A standard QL cannot display more than 8 colours without significant extra hardware changes to a lot of the video circuitry, by which time it would probably no longer be recognisable as a QL. I for one would certainly hesitate to call such a modified computer a "QL".

## HIGH RESOLUTION

The term "high resolution" simply tells us that there are more pixels on the screen, so if your monitor is the same size, the pixels are smaller and packed together a bit more so that you get a greater detail on the screen.

The great advantage is more detail and room for more (and bigger) program windows on the screen, as you will have seen from my screen shots in the December/January issue on page 56.

Various systems such as Aurora have made it possible to have several screen resolutions, as the screen sizes are referred to. Sure, the Aurora card can use the original 512x256 (512 pixels across and 256 down)

# QUANTA Magazine

pixel display like a standard QL. It can also be set to various other resolutions up to 1024 pixels across by 768 down if a Super Gold Card is being used. N.B. This particular size (1024x768) is only possible with a special monitor, although most sizes can be used with a conventional monitor.

Ordinary QDOS does not support these “high resolution” screen sizes. If you are running a standard QL ROM such as versions JM, JS, MG or even a Minerva ROM, you can only use a 512x256 screen.

There is no exception to this, apart from two special cases:

1. A QXL with SMSQ (the original version, without the pointer environment) allows a small selection of screen sizes,
2. The uQLx emulator allows larger screens as long as you use a Minerva ROM image. I have never used uQLx to know if I am completely correct to say this, though.

If you are using SMSQ/E with the Aurora, you can use the high resolution screens by using the DISP\_SIZE commands to change the screen resolutions. For example, DISP\_SIZE 640,480 to change to a screen size of 640 pixels across and 480 pixels down.

This is similar for other platforms running SMSQ/E. The DISP\_SIZE command lets you change the screen resolution, but not all platforms will support all sizes. For example, a Q40 might only let you use resolutions of 1024 pixels across and 512 down, or 512 across and 256 down like a QL. The reality is that different hardware or different emulators can do different things, so don't assume all resolutions will be available on all systems even if SMSQ/E is present!

## HIGH COLOUR AND GD2

In addition to high resolution, some QL systems allow you to use more colours than the standard 4 or 8 colours available on a standard QL. This is generally referred to as ‘colour depth’ – in simple words, the number of colours you can choose from and display on the screen.

The first of these was a computer produced by CST in the mid-1980s, called the Thor XVI. It took the mode 8 layout of the QL screen and

## QUANTA Magazine

used the flash bit to double the number of displayable colours. On a standard QL mode 8 screen, each pixel on the screen uses three bits in screen memory and one bit to specify flashing changing from off to on or on to off. This is explained in the “screen” and “colour” pages of the Concepts section of the QL user guide. In simple terms, the three binary bits used for colour in mode 8 allow values from 0 to 7. Using the flash bit as an extra bit for colours doubled this, allowing colour numbers 0 to 15 or 16 colours. I have never owned a Thor 16, so I don't know if these were all different colours or just different shades of the standard 8 colours.

After that, things got a bit more complicated, so I'll try to provide a simple explanation.

High colour is generally only supported by having the SMSQ/E operating system on your computer or emulator and whether or not your system actually supports more colours in the first place – a QL doesn't, some emulators don't and so on. A computer able to make use of more than the standard 4 or 8 colours is broadly described as having GD2, or GD2 capable. The term 'GD2' stands for 'Graphic Device Interface 2' (source: Tony Tebby's original SMSQ/E 2.98 Display documents). Some people also refer to them as the “colour drivers”, a vague term from when GD2 was just a glint in Tony Tebby's eyes. So the new colour modes are generally referred to by any of these terms!

The Aurora card has two modes with more colours. One is a 16 colour mode which has never been supported even by SMSQ/E and is of little practical use these days. The other is a 256 colours mode, also known as an '8 bit' colour mode. Whatever you call it, it provides 256 colours in a choice of resolutions, but to use this mode you need (a) a Super Gold Card with the Aurora, and (b) the right version of SMSQ/E, which was specially put together by Marcel Kilgus to include suitable drivers for the new colours on the Aurora. Note that a standard Gold Card version of SMSQ/E does not support this 256-colour mode. You must use the special Aurora version and the Aurora must be fitted with a Super Gold Card. Of course, you can still use the standard QL-type display modes if you want to run old games which won't work in the new colour modes.

Other new QL hardware and emulators have used a 16-bit colour system. This allows for up to 65536 colours, but the actual way in which they use colour may vary.

# QUANTA Magazine

The QXL card was an attempt by Miracle Systems Ltd to make a QL on a card to plug into a PC. Originally it was supplied with a version of SMSQ which did not include the pointer environment. It allowed you to use mode 4 and mode 8 screen colours, together with a choice of resolutions – you could use a QL-style 512x256 display. You could also use EGA graphics mode (640 x 350 pixels), VGA graphics mode (640 x 480 pixels) and SVGA mode (800 x 600 pixels). Originally, you could only have 4 or 8 colours, although a version of SMSQ/E was later produced which allowed for a 16-bit 65536 colour system.

The Q40 and Q60 computers are advanced QL compatible computers designed by Peter Graf in Germany. These can use a 512 x 256 screen like a QL, but also use a 1024x512 screen with 16 bit colour system allowing up to 65536 colours. While it is just as easy to use – it uses the same commands in BASIC for example – the actual layout in memory for each pixel is pretty unique.

QPC2 is an emulator which runs QL software in Windows on a PC by pretending to be a 68010 or 68020 processor. It has a very flexible graphics system which can use just about any resolution from a QL sized screen up to very large – I don't know the maximum size, but I regularly use it at up to 1920x1080, which is the best my monitor can handle. In terms of colour, QPC2 has 2 levels of colour available, in addition to modes which resemble the QL 4 and 8 colour modes:

1. 16-bit colour, up to 65536 colours
2. 8-bit colour, like an Aurora, but more choice of screen resolution sizes.

## LOW COLOUR

Not really the correct name, but contrasts nicely with what we are talking about here. This refers to a unique 2 colour (black and white) mode available only, as far as I know, on some versions of the Atari ST QL emulator systems. Unless you use an Atari ST with a QL emulator board built in which supports this feature, you are extremely unlikely to encounter this particular graphics mode.

## SMSQ/E

This is an enhanced operating system for the QL and derivative computers (e.g. Aurora and Q40/Q60) and some emulators (e.g. QXL card, QPC2, QemuLator, Atari ST-QL boards).

# QUANTA Magazine

QDOS on a QL occupies a standard 48 kilobyte ROM space. SMSQ/E is quite a lot bigger.

It adds new facilities and fixes some problem areas in the original QL ROMs. It adds an enhanced BASIC - there are many more commands and functions, some of which are to support the new graphics capabilities. To quote Marcel Kilgus, "...some gold is required for SMSQ/E". If you want to use SMSQ/E on a QL, it must have a minimum expansion of Gold Card (or a Super Gold Card is even better).

If you are using QPC2, you don't need to think of how to add SMSQ/E. QPC2 is always supplied with SMSQ/E.

To use SMSQ/E on other systems you need to follow the instructions for the particular system in question – the installation procedure is different for most systems, which makes it sound like it will be complicated, but it isn't really as long as you follow the instructions.

Please note that if the version number of SMSQ/E on your system is older than version 2.98 it is unlikely to support the new colour modes as these were first introduced, to the best of my knowledge, in version 2.98. Then, in version 3.00 of SMSQ/E, the new Window Manager was introduced and we never looked back!

## WINDOW MANAGER 2

In addition to the new colours, we now have something called Window Manager 2. This is a little bit harder to explain and understand for those who have never come across it before.

The best explanation of the term "Window Manager" I have seen comes from Tony Tebby's QPAC2 manual, where he says: "The Window Manager provides a set of utility routines which simplify the handling of menus and pull-down windows...using it provides a reasonably uniform user interface to applications programs." In other words, it's a set of standardised routines programmers can use to make their programs look and work alike in a pretty standard way.

Window Manager 2 took the original concept and built on it to give extra features to support new facilities introduced by the arrival of the so-called "colour drivers" (the "GD2" mentioned above).



# QUANTA Magazine

It's a system for making better use of the colours in a coordinated and standard way, so that programs look and work in a standardised and uniform sort of way. It provides for colour themes, where the Window Manager contains lists of standard colours which programs can use to make sure of a consistent appearance to programs. This list of colours is called the System Palette (actually, there are 4 of them, although most programs just use the first). There are BASIC commands starting with WM\_ such as WM\_INK and WM\_PAPER which let you make use of these colours so that your program can look similar to the colour scheme used by modern programs like QD and QPAC2. It provides for improved sprite handling too, as well as some fancy border colours and 3D effects.

Once the Window Manager 2 had been produced for high colour systems, it seemed logical to bring some degree of support for the new features to the original pointer environment for QDOS, to allow most programs written for the new systems to work to some degree on the older versions., albeit without so many colours. Thus pointer environment version 2 was born. Marcel Kilgus says that this has all Window Manager 2 features except for high colour support.

If you want a more visual idea of what GD2 and Window Manager 2 are all about, see Marcel Kilgus's web page at

<http://www.kilgus.net/smsqe/gd2.html>

## CONCLUSIONS

I hope that this article helps you understand a bit about what all these various facilities are about and encourage you to explore and use them. If there are specific areas you'd like to see covered in follow up articles, please do get in touch with me by email at [Helpline@quanta.org.uk](mailto:Helpline@quanta.org.uk) or via the contact details on page 2 of the magazine.

# QUANTA Magazine

## Glossary

**8-bit colour modes** – graphics system capable of showing up to 256 colours on screen.

**16-bit modes** – graphics system able to display 65536 colours on screen.

**Aurora** – a QL compatible computer designed by Nasta for Qubbesoft PD several years ago.

**EGA mode** – a graphics system with up to 640 pixels across the screen and 350 down.

**Emulator** – a program which runs on a particular operating system which pretends to be a QL so that it can run QL software.

**GD2** – Graphics Device Interface version 2. Handles more colours than a standard QL.

**Gold Card (or Super Gold Card)** – a plug in circuit board made by Miracle Systems Ltd for a QL, which adds a faster processor, floppy disk interface and expanded memory.

**High Resolution** – a system which allows QL compatible systems to have more than the usual QL 512 x 256 pixels on the screen.

**Pixel** – picture element, a “dot” on the screen. A standard QL has 512 of these across the display, and 256 down.

**Pointer environment** – a system which enhances the QL by providing an on-screen pointer used to select things on the screen. Also enhances the computer by saving and restoring the display automatically, so that you don't need to keep redrawing a program's display when other programs may have written all over it.

**Q40 and Q60** – two QL compatible computers, designed by Peter Graf.

**QPC2** – a QL emulator program for Windows.

**QXL** – a QL-on-a-card which plugged into a PC, sold by Miracle Systems some years ago.

**SMSQ/E** – a replacement operating system for QL and compatible systems.

**SVGA mode** – a graphics system for the PC with up to 800 pixels across the screen and 600 pixels down.

**System Palette** – a “colour theme” system, whereby a list of colours is maintained, which programs can read and use to make sure programs look similar, e.g. all programs can have the same border colour or background colour.

**uQLx** – a QL emulator program, for the Linux operating system.

**VGA mode** – a PC graphics mode, with up to 640 pixels across the screen and 480 pixels down the screen.

**Window Manager** - provides a set of utility routines which simplify the handling of menus and pull-down windows. Window Manager 2 is a more advanced version, which knows how to handle the new graphics modes and colours.

# QUANTA Magazine

## SUBGROUP MEETINGS

### THE WEST MIDLANDS QL USER GROUP

**T**here has been a change of venue, brought about by the owners of the Queens Head pub changing it from a straight pub into an eatery. The new meeting place is called the Bull, the address is 1 Price Street, Birmingham, B4 6JU. Approx 7 minutes walk from Snow Hill main-line railway station and has ample street parking nearby. Meetings remain open to QUANTA members and non-members alike.

After your first meeting you're expected to pay £1 each time towards the organisation and monthly newsletter costs - except once a year when the group pays all those who attend a pound instead ;-)

We provide food twice a year for those who attend the AGM and the group's birthday party) and at meetings we discuss all sorts of things, QL-related and otherwise, usually from about 8:20pm onwards till 10:30 or later. The group owns QL hardware, a disk library and subscribes to relevant magazines. People can join the mailing list for £3.50 per year, even if they can't attend regularly.

**Meetings** : Meetings are usually on the first and third Monday of each month (but not on bank holidays unless the previous one was cancelled for that reason).

**Contact** : The contact number remains Mike Bedford White's, on 0121 605 4438, anytime after 11am.

Email: [mikebwhite@blueyonder.co.uk](mailto:mikebwhite@blueyonder.co.uk)

### QUANTA DORSET SUBGROUP - Dorset

**M**eetings are held, on the second Sunday of each month between 2.00pm and 5.00pm.

For location please contact:- John Penn-Simkins or John Mason.

John Penn-Simkins 01202 422491 or John Mason 01425

# QUANTA Magazine

## LONDON QL AND QUANTA GROUP

**M**eetings are held in the School Room, which is the basement of the Borough Welsh Congregational Chapel, 90, Southwark Bridge Road, London SE1. This is almost opposite the junction with Marshalsea Road, at the other end of which, 5 minutes walk away, is the Borough Underground Station. Free parking is easily available in Southwark Bridge Road for road users, Cyclists are welcome.

Members currently each pay a subscription of £40 per year towards the cost of the hire of the hall and a small additional charge is made for tea/coffee - biscuits are then provided free.

Please bring your QL equipment if possible, all types welcome, e.g., PC portable running emulators. The Group has some systems stored at the venue for its use. In addition, there are lots of donated second user equipment, books, magazines, etc, available for purchase.

Time: 2.00 pm. to 5.00 pm., on the second Sunday of the month. No meetings are held in December / January - winter break, or July / August - summer break, giving 8 meetings a year.

Malcolm Cadman: Tel: 020 8691 5780

email: [QL@mcad.demon.co.uk](mailto:QL@mcad.demon.co.uk)

## NEMQLUG - THE NORTH EAST MANCHESTER QL USER GROUP

**M**eetings are held at 181, Urmston Lane, Stretford, Manchester. M32 9EH (Near Junction 7 of M60 Motorway - Was Junction 7 M63 Motorway). Our informal meetings start at 7 p.m. and finish at 11 pm. All welcome.

Meets on the last Thursday of each month (except December).

John/Sarah Gilpin 0161-865 2872 ([thegilpins@btopenworld.com](mailto:thegilpins@btopenworld.com))

# QUANTA Magazine

## SCOTTISH QL USERS GROUP

**S**QLUG meets at George Gwilt's home every second Sunday in the month. Please contact George Gwilt before coming to get the location.

[Gdgqler@gmail.com](mailto:Gdgqler@gmail.com)

## SOLENT SUBGROUP

**M**eets at Botley Market Hall, all welcome. Park at the back and use side entrance.

1st Saturday of the month from 2.00 pm to 6.00 pm.

Graham Evans, Tel: 023 8040 3350.

## SURREY QUANTA SUBGROUP (SQSG)

**T**he group is currently trying other venues in the Leatherhead - Epsom area. If you plan to attend but do not get our emails, please phone or email Ken Bain for the latest location.

Meetings are 8.00 to 10.00 pm. On the last Wednesday of each month except December.

Ken Bain - 01932 - 347 432 (to midnight), [kenb@bcs.org.uk](mailto:kenb@bcs.org.uk)

## SUSSEX QL USER GROUP

**C**urrently without a meeting place, anyone interested should contact Keith Mitchell or Roy Wood.

Roy Wood, 01273 430501 or Keith Mitchell, 01903 742263.

QUO VADIS  
DESIGN

Independent Information  
Technology Services

# www.ql-qvd.com

The screenshot shows the Quo Vadis Design website. At the top left is the logo 'QUO VADIS DESIGN' and the tagline 'Independent Information Technology Services'. The main header is 'QL/QDOS/SMSQ/E Software'. Below this is a navigation bar with links for 'Home', 'Products', 'Support', 'Company', and 'Contact'. The main content area is divided into several sections: a 'Welcome' message, a 'News' section with two items: 'QVD QL News Blog - keep up to date' and 'Quo Vadis Design Website Launched', and a 'FEATURED PRODUCT' section for 'QPG II' with a 'BUY NOW' button. At the bottom, there is a copyright notice and a footer with navigation links.

QL/QDOS/SMSQ/E Software

Bruce@ql-qvd.com

Quo Vadis Design  
38 Derham Gardens  
Upminster  
RM14 3HA  
UK

Tel: +44 (0)20 71930539  
Fax: +44 (0)870 0568755

Check the QL News Blog on  
our website for updates.

[www.ql-qvd.com/blog](http://www.ql-qvd.com/blog)



Subscriptions taken online



